Modern packaging

Nominated for *Packaging's Hall of Fame*. Story on Page 78

August 1951

• *"you name it... I helped make it!"*

Glue that cushions the bumps

Easy as this! When shipping. You can't stack loose shipping containers in a freight car or truck. They'll bounce around. And damage critical defense material. You use glue! Two easily applied strips. Along the bottom. These strips lock each container to the one immediately below. As many as 32 on a single wooden pallet. They can't bounce around. Contents aren't damaged. Handling's faster. 32 containers are picked up as one. Unloading? An upward thrust releases each container. Easily!

... and there's more to load-locking with glue!

• *"you name it ... I helped make it!"* Multi-wall paper and fabric bags can also be palletized with glue. Here, too, pilferage is discouraged. Damage claims reduced. Steel straps eliminated. Handling costs are lowered. One man can load or unload an entire freight car in one hour. The NATIONAL touch is everywhere. Glue applied through imaginative research and service. To every item of defense and daily life.

STARCHES **National** ADHESIVES

NATIONAL STARCH PRODUCTS INC.

Executive Offices: 270 Madison Ave., New York 16, N. Y. • ***Plants:*** Dunellen, N. J., Chicago, Indianapolis, San Francisco. • ***Sales Offices:*** All principal cities. • ***Canada:*** Toronto and Montreal. • ***England:*** Slough. • ***Holland:*** Veendam.

Starch for Paper... from Pulp to Packaging!

free folder offers useful information on starches and adhesives for the paper industry

Here's the folder that was so much in demand at the TAPPI-APPA show! A complete listing of National Starches and Adhesives for paper making . . . coating . . . converting. Every requirement you can think of, *plus* the latest developments to come out of our research laboratories!

Of certain interest to paper technicians are:

HYDROSEAL, a new beater additive that closely approximates the gelatinous substance formed by pulp hydration . . .

FLOKOTE, an unusually stable oxidized starch for coating operations . . .

DURA-BOND, for combining corrugated board. Permits starch savings up to 10% . . .

—and a number of quality dextrines and starches that are uniform in working properties, texture and color . . . a complete line of "fluidities" . . . acid and chlorinated conversions. Specialties for beater, tub and calender sizings, brush or machine coating and greaseproofing. Also, converting adhesives for laminating, combining, mounting, heading and wrapping. Special formulations including taping adhesives for corrugated boxes . . . heat seal adhesives . . . tube winding glues in cold-water swelling, cook-up and prepared form.

Title: "The Amazing Versatility of Starch" for the paper industry. Copies available upon request. Clip the attached coupon or write NATIONAL STARCH PRODUCTS INC., 270 Madison Avenue, New York 16, N. Y.

Please send a copy of the new National Starch folder for the paper industry.

Name_____

Title_____

Company_____

Address_____

City_____ Zone____ State____

GAIRVURE

New, multicolor printing technique for PACKAGING

Sells on Sight!

This new, amazing and exclusive multi-color GAIRVURE printing on paperboard eliminates expensive outside wraps...and with substantial economy too.

At last, GAIRVURE opens up a new and lucrative field of smart, artistic packaging. Your GAIRVURE PACKAGE will radiate and reflect the eye appeal and buying impulse you have been trying to achieve for years. When displayed on the dealer's counter, showcase, shelf or in the window a dramatic SALES IMPACT is created. In many instances sales have doubled and tripled through the persuasive influence of these brilliant multi-color GAIRVURE CARTONS.

Famous products are NOW going to market in GAIRVURE cartons...they SELL ON SIGHT...yielding profits never before enjoyed in your industry.

GAIR®

SEND FOR BROCHURE AND SAMPLE

Upon request we will gladly send descriptive literature and sample of multi-color GAIRVURE. Write today.

DEPENDABLE SHIPPING CONTAINERS

are produced in strategically located Gair Plants.

ROBERT GAIR COMPANY, INC., 155 EAST 44th ST., NEW YORK • TORONTO

PAPERBOARD • FOLDING CARTONS • SHIPPING CONTAINERS

Modern packaging

Vol. 24 No. 12 August 1951

General

Displays that sell 61
Here are six case histories to prove that the successful point-of-sale piece is the product of resourceful planning—not luck.

Mechanized squeeze-bottling 68
Ciba's improved 'nebulizer' demonstrates the use of new machinery to speed the assembly of polyethylene spray containers.

Snow Crop goes horizontal 71
Unable to change trade practice in frozen-food display, this packer changes label to conform.

Igloo for ice cream 72
At long last, a factory package that will preserve refrigeration on the trip from the self-service case to the home freezer.

Utility extras 75
Max Factor's new 'Signature' line demonstrates careful planning for plus features in polyethylene squeeze bottles.

Coca-Cola 78
Its classic bottle design has helped make this month's nominee to *Packaging's Hall of Fame* the world's best known and biggest selling glass package.

Design Histories 86
Simulated alligator surface for polyethylene flask . . . candy canes in cradle package . . . bright red for frozen-food wrap.

Dissolving package 88
Special film containing semi-solid pigment is miscible with the paint with which it is mixed in new coloring system.

Round-table planning 90
A meeting with suppliers like this one conducted by Morton Mfg. Co. may answer many difficult procurement problems.

Packaging Pageant 92
Treasure-chest gift package for leather wallets . . . olives mounted on plastic tree within glass bottles . . . other new ideas.

Canned fresh dates 94
Vacuum packed by a new process, they maintain their original flavor and provide an inexpensive, profitable food-store item.

FR's improvements 96
Refinements in packaging of a well-designed photo-supply family show how continuing study helps to increase sales.

Display Gallery 100
Cut-out trade character forms unusual counter unit . . . weather stripping in dispenser box . . . wire rack for packaged linen.

K is for Kleinert's 102
A ribbony initial is the keystone of a strong but simple new package design tying together line of women's necessities.

Technical

Free oil in packaged foods 107
A method of measuring resistance of container materials to stain from the product. By Arthur H. Landrock and Bernard E. Proctor.

New PI proposals 113
Two test methods for screw-cap liners are offered for trial and criticism.

Questions and Answers 116

Departments

Equipment and materials 120

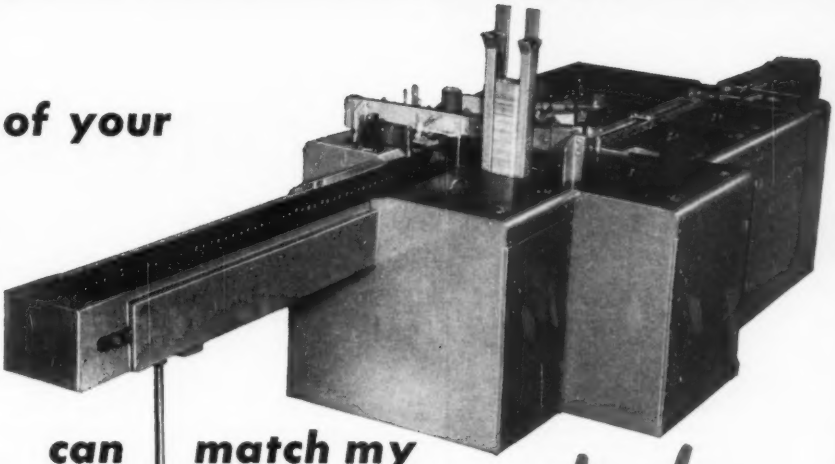
Plants and people 130

For your information 138

Washington review 142

U. S. patents digest 148

"Which of your employees can match my guaranteed dependability"



WORK RECORD SUMMARY

NAME Jones Fully Automatic Cartoning Machine

FOR PERIOD Since Employment

TIMES ABSENT 0

TIMES TARDY 0

VACATION None

SICK LEAVE None

Faithfully yours,

Jones fully automatic constant motion Cartoning Machine

THAT'S THE WAY I AM — always on the job. And that's one reason I show average savings (on the record) of $36.33 to $189.40 per day!

Being on the job is important, but equally so is being able and ready to work. I never have a hangover, never have a flare-up of "nerves," and never blow my top or display other manifestations of temperament.

I'M WIDELY EXPERIENCED — require minimum supervision and no job training. I work smoothly with green help.

You'll never hear me discuss hours worked, overtime, vacations or sick leave. **I DON'T STRIKE, LAY OFF, OR SLOW DOWN.** I just keep on doing the job you want done.

I have held and am holding thousands of jobs for employers who like my inhuman solution of the "human factor" problems of carton loading.

The record of 97 such jobs is detailed in a book which will be sent to you FREE on request. It compares costs of hand loading with my fully automatic carton loading, for all types of loads—from the simplest to the most complicated. Ask for your copy today.

R. A. JONES & COMPANY, INC.

Cartoning Machines — Soap Presses

P. O. BOX 2055 · CINCINNATI, OHIO

Modern packaging

President and Publisher
CHARLES A. BRESKIN

Editor
LLOYD STOUFFER

PEARL HAGENS, *Managing Editor*
C. A. SOUTHWICK, JR., *Technical Editor*
GLADYS TARRAGANO, *Associate Editor*
WILLIAM C. SIMMS, *Associate Editor*
VAL WRIGHT, *Midwest Editor (Chicago)*
FLORENCE GETTER, *Reader Service Editor*
DONALD R. RUTHER, *Art Director*
H. A. LEVEY, *Patents*

Advisory Editor
C. W. BROWNE

●

BUSINESS STAFF
ALAN S. COLE, *V. P. and General Manager*
P. H. BACKSTROM M. A. OLSEN
B. W. GUSSOW S. S. SIEGEL
Chicago: J. M. CONNORS, Manager
W. F. KENNEDY
Cleveland: R. C. BEGGS
Los Angeles: JAMES C. GALLOWAY
London, England: L. H. DOLARO
DANIEL M. BROADS, Production
LYNN B. KAHN, Production
PHILIP W. MULLER, Promotion
FREDERICK A. KLEIN, Circulation
T. B. BRESKIN, Assistant to the Publisher

●

EXECUTIVE AND EDITORIAL OFFICES: 575 Madison Ave., New York 22; Tel.—Plaza 9-2710.

BRANCH OFFICES: *Chicago*, 101 E. Ontario St., Chicago 11, Ill.; Tel.—Delaware 7-0060. *Cleveland*, 815 Superior Ave., Cleveland 14, Ohio; Tel.—Superior 1-0737. *Los Angeles*, 816 W. Fifth St., Los Angeles 17, Calif.; Tel.—Mutual 8335. *London, England*, L. H. Dolaro, European Advertising Representative; 10, 11 and 12 Broad Street Ave., Blomfield St., London, E. C. 2, England; Tel.—London Wall 4231.

Modern Packaging published monthly by Modern Packaging Corp. at Emmett St., Bristol, Conn. Subscription $5 for one year, $8 for two years. All foreign subscriptions payable in United States currency or equivalent in foreign currency computed in current exchange by money order or by draft on a New York bank. Price this issue, 75c per copy. Copyright 1951 by the Modern Packaging Corp. All rights reserved including the right to reproduce this book or portion thereof in any form. Printed in U.S.A. Acceptance under Sec. 34.64 P. L. & R. at Bristol, Conn. Authorized Dec. 21, 1950.

MODERN PACKAGING is regularly indexed in the *Industrial Arts Index*.

EDITORIAL

Crisis in machinery

THE IMPORTANCE OF the packaging-machinery industry is out of all proportion to its size. This industry, without which the whole system of distribution of packaged merchandise would soon break down, consists of no more than 75 companies. Twelve of these turn out the bulk of the production in machines of the more-or-less universal type; the remainder are small companies with specialized interests.

We think it is a matter of some concern, therefore, that for lack of a minor adjustment in the Controlled Materials Plan the entire packaging-machinery industry faces the prospect of being forced into direct defense work, to the neglect of the very real need for replacement machinery and replacement parts to keep military and civilian packaging going.

We say "forced" because unless some provision is made to provide these machine makers with the relatively minuscule amount of metals that they require to keep their regular production alive, they will be forced into armaments tooling as a matter of survival. We have only to recall the latter stages of World War II, when most of these companies were half converted to war work and some 100% tied up, to realize what serious straits this might cause.

At present the machinery makers have no means of procuring the iron, steel, brass, copper, aluminum and other allocated materials that they need, except for a few rated Maintenance and Repair Orders. At the same time, they have received direct defense contracts equivalent to only 1% of their capacity. The temptation to plunge full tilt into defense work must be strong.

Certainly packaging-machinery users do not expect "business as usual"; they are prepared to conserve and make do now as they have before. Surely the machinery maker can devote a good portion of his production to military items. But certain replacement needs are requisite if production of necessary civilian goods is to be maintained and we suggest that materials controls should be adjusted now to provide for continued machinery supply at a safe level.

The Editors

DOBECKMUN CREATES

Traveling through Pennsylvania, our art director noticed the frequent use of these good luck symbols, on barns and other buildings. He thought they would be of special significance for products sold in that area. So, he designed around them this attractive Bott Boi Noodle package, of transparent, printed cellophane. Its novelty appealed instantly to Mr. C. E. Wolfe, President, Megs Macaroni Co., Harrisburg, Pa.

MEGS MERCHANDISES

Still more enthusiastic over the final package, Mr. Wolfe merchandised Bott Boi Brand extensively, with an area radio network, recipe contest (included on the bag) and other methods. Result . . . housewives quickly turned from homemade Dutch noodles to delicious, convenient Bott Boi Brand, which immediately gained amazing sales volume and wide distribution.

Thus are ideas born. Translated effectively to the right medium, they create and hold sales volume. Working with films, foils and other materials, Dobeckmun creates packages with sales impact. Supplies are limited now, but *ideas* flow freely. Ask us for suggestions to be produced when films and foils are more readily available.

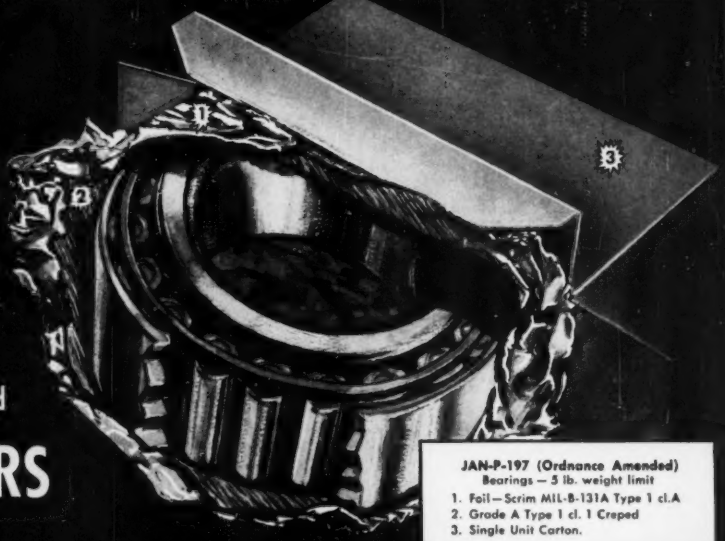
The Dobeckmun Company
Cleveland 1, Ohio. Berkeley 2, Calif. Bennington, Vt.

Dobeckmun
CREATIVE CONVERTERS OF FILMS AND FOILS

Branches at: Atlanta, Boston, Chicago, Cincinnati, Cleveland, Detroit, Indianapolis, Kansas City, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, Portland, Rochester, St. Louis, St. Paul, Seattle. Representatives everywhere.

Bearings...

OUR FRONT LINE OF DEFENSE



VANANT

Greaseproof
Waterproof
Water-Vaporproof

BAGS and BARRIERS

JAN-P-197 (Ordnance Amended)
Bearings — 5 lb. weight limit
1. Foil—Scrim MIL-B-131A Type 1 cl.A
2. Grade A Type 1 cl. 1 Creped
3. Single Unit Carton.

Engineered to MILITARY SPECIFICATIONS

Methods IA and II . . . JAN-P-117, JAN-B-121 . . . MIL-B-131A . . . JAN-P-125 . . . MIL-C-6056 (superseding AN-C-67b) . . . AN-E-1b and AN-B-20 . . . these are just a few of the many specifications on which Vanant field specialists can offer you packaging assistance.

Call These VANANT Representatives on Your Packaging Problems

Vanant Products
62 Evergreen Avenue
Auburndale 66, Mass.

Allied Commodities Co.
Kansas City Merchandise Mart
Kansas City 8, Mo.

R. M. Bracamonte & Co.
252 Spear Street
San Francisco 5, Calif.

Leonard Barol & Associates
1508 Finance Bldg.
Philadelphia, Pa.

Allied Commodities Co.
Andrus Bldg.
Minneapolis 2, Minn.

William Diemer & Co., Inc.
274 Madison Avenue
New York 16, N. Y.

W. T. Segerstrom
2122 4th Ave.
Seattle 1, Wash.

Standard Parts & Equipment Co.
904 N. Main - P.O. Box 4385
Fort Worth, Texas

Vanant Products
813 N. La Brea
Los Angeles 38, Calif.

R. M. Reutlinger & Associates
Hulman Bldg.
Dayton, Ohio

Packaging Materials Co.
431 E. Burleigh St.
Milwaukee 12, Wisconsin

Protective Packaging Co.
542 S. Dearborn St.
Chicago 5, Ill.

VANANT PRODUCTS
730 W. Virginia St.,
Milwaukee, Wis. *Plant:* **Tomah, Wis.**

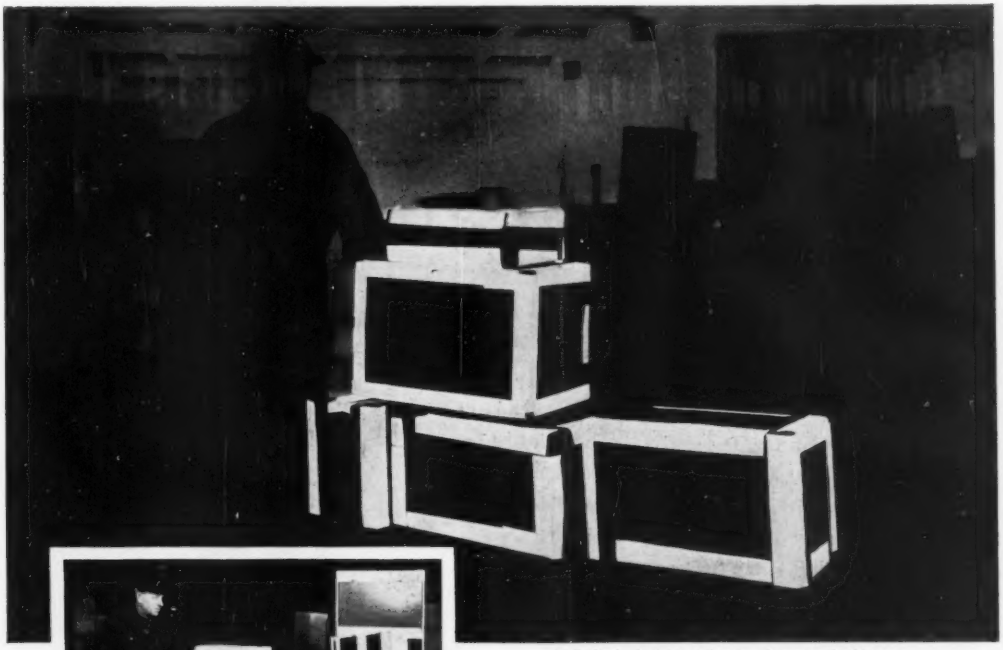
VANANT

ENGINEERED PACKAGING

Converters of Military Specification
BAGS and BARRIERS
Polyethylene and Other Transparent Films

Another new development using

B. F. Goodrich Chemical Company *raw materials*



B. F. Goodrich Chemical Company does not make this tape. We supply raw materials for the coating only.

Tape that says "HERE I AM" in the dark!

THIS luminescent tape glows brightly all night long . . . an important safety factor wherever artificial lighting is not possible. It renews itself during daylight again and is good for many nights' use. In the luminescent coating a Geon resin serves as the pigment binder. This in turn is protected by a transparent surface coating of Geon.

Because water would damage the luminescence, Geon guards it against dampness and also protects it against scuffing, grease and oil.

This luminescent tape is at present not available for civilian use.

It's another example of Geon materials' versatility. For Geon is adaptable to scores of uses where resistance to heat and cold, weather, aging and wear are important—often vital. And Geon materials have *more* advantages. They're highly resistant to oil and grease, chemicals and other damaging elements.

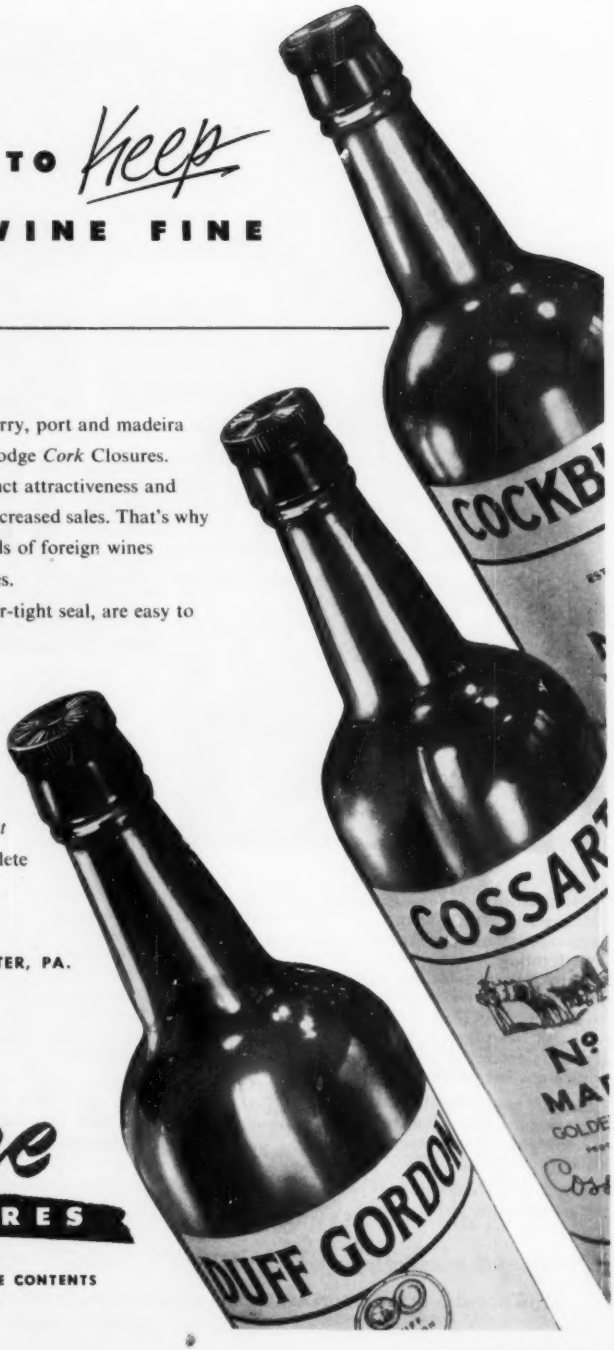
Geon materials come in many forms —including resin, latex and compounded plastics. They may be just what you need to improve or develop a product, or to convert to defense production. Right now demand exceeds supply, but experimental quantities are available for development work. For information and helpful technical advice, please write Dept. GJ-4, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco.

This tape will be on display in our booth #232 at the National Packaging Exposition, April 17-20, Atlantic City.

GEON RESINS • GOOD-RITE PLASTICIZERS . . . the ideal team to make products easier, better and more saleable.

GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers • HARMON organic colors

HOW TO *Keep* A FINE WINE FINE



To seal-in the fine flavor of its imported sherry, port and madeira wines, Munson G. Shaw Co., Inc. selects Dodge *Cork* Closures. Shaw knows the importance of added product attractiveness and improved product quality in the battle for increased sales. That's why Shaw now bottles many of its famous brands of foreign wines *completely automatically* in the United States.

Dodge Milbossed-top corks provide an air-tight seal, are easy to use—on the production line, at the bar or in the home. The cork shanks are uniform in quality and the milbossed wood top is available in standard designs or embossed with your own name or trade-mark.

You'll do well to discover, as Shaw has discovered, that "*this closure has found great popularity with consumers.*" Write for complete information or, for quick action, send a bottle for fitting.

DODGE CORK COMPANY, INC., LANCASTER, PA.

Dodge

CORK CLOSURES

DESIGNED TO GUARD THE INTEGRITY OF THE CONTENTS

TRAVER

CORPORATION

Designers of Modern Packages

Multi-Color Printers of Cellophane, Glassine, and Foil in Sheet and Roll Form. Manufacturers of Plain and Printed Cellophane, Glassine, Foil and Tralon Bags. Converters of Other Plastic Films and Protective Papers. Manufacturers of LoxTite Paper Board Partitions, Dividers and Trays. Fabricators of Flexible Military Packaging Materials under Government Specifications.

CELLOPHANE DIVISION
358 W. Ontario St.
Chicago 10, Ill.

ROTOGRAVURE DIVISION
225 W. Ohio St.
Chicago 10, Ill.

LOXTITE DIVISION
404 N. Sacramento Blvd.
Chicago 12, Ill.

PAPER BOARD PRODUCTS DIVISION
Villa Grove, Ill.

For Beautiful Protection
VENESTA
Aluminium
Foil
Full protection plus attractive appearance is achieved
for innumerable products by wrapping in
VENESTA PRINTED ALUMINUM FOIL
Highest quality always proves cheapest in the long run and the
discerning buyer will find that he is fully justified in
placing his orders with Venesta Limited—pioneers in foil rolling.
VENESTA LIMITED
Whitehall House, Queen Street Place, London, England. Cablegrams: "Venesta, Lond
VENESTA
PRODUCT

Borden's Camembert Ripens Right in TRI-STATE'S BOX THAT BREATHES!

© Borden Co.

"What we need," Elsie explained, "is a rigid plastic container that will keep our Military Brand Camembert free from dust, dirt and contamination, and yet leave space for air to circulate around and gently age this delicious cheese *after packaging*."

Back to Tri-State where packaging problems had been solved for them in the past came The Borden Cheese Company. And Tri-State developed the rigid plastic container shown above for this largest selling of all Camemberts in the United States.

The half-round rigid plastic box is molded of clear Styron to provide excellent visibility of the three, foil-wrapped portions. Specially engineered wedges in lid assure a tight fit but permit air to enter box. Raised Borden signature on bottom of container allows complete interior air circulation and permanently identifies the package.

Tri-State Plastic Molding Company has an equally complete and economical answer to your packaging problems. Whether you manufacture a food, a confection, mass or class products of any kind, we're equipped to mold to your specifications—to answer your particular needs with a gleaming, transparent, rigid plastic showcase that will keep your product fresher, cleaner, more *appealing*. Or you may choose from our stock shapes and sizes—*the World's Greatest Assortment of Rigid Plastic Boxes*.

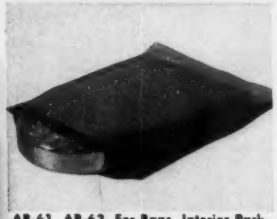
The best Rigid Plastic Boxes are Injection Molded by

TRI-STATE PLASTIC MOLDING COMPANY, Inc.

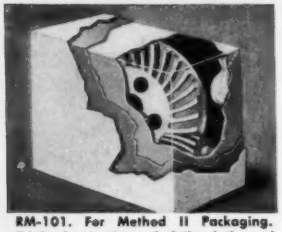
HENDERSON, KENTUCKY

NEW YORK: 12 E. 41st St., Murray Hill 3-6572 **CHICAGO:** 176 W. Adams St., Franklin 2-7292 **LOS ANGELES:** 10583 Holman, Arizona 9-267.

THE UNEQUALLED SCOPE FOR MILITARY AND



AR-61, AR-63. For Bags, Interior Packaging. Foil on kraft material. Greaseproof, waterproof and moisture-vapor proof. Meets specifications set forth under JAN-B-121 and JAN-P-117.



RM-101. For Method II Packaging. Triple lamination of foil, cloth and heat-sealing plastic sheet. Meets specifications for the carton-barrier-carton type of application enclosing a desiccant.

Shown here are four principal military packaging applications of Reynolds Aluminum Foil.

Reynolds leadership in this field is based not only on experience through World Wars I and II, but also on the unequalled range of Reynolds developments in civilian foil packaging.

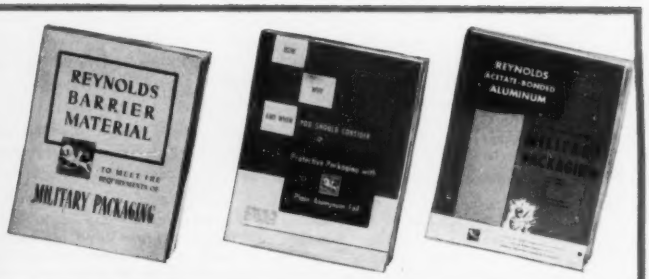
Development of new materials and methods continues to meet the new requirements of today.

Packaging technicians in Reynolds Sales Offices will be glad to consult on specific problems.

A-90. For Accessory Packaging. Flexible foil-on-kraft with waterproof laminant and clear Vinyl Heat Seal Coating. Extremely low MTV for many quartermaster packaging applications.

Aluminum Foil for Grade A Wrap. Meets specifications under JAN-B-148; has many applications as a greaseproof intimate wrap in place of Grade A greaseproof barrier material under JAN-B-121.

Write for any or all of these technical booklets. Left to right: 16-page illustrated book on seven barrier materials, with full-page samples; 8-page booklet on plain aluminum foil, with samples; 4-page folder, with sample, on acetate bonded aluminum.



REYNOLDS METALS COMPANY
Sales offices in principal cities. Or address **Reynolds Metals Company,** Packaging Market Sales, 2500 South Third Street, Louisville 1, Ky.

REYNOLDS METALS

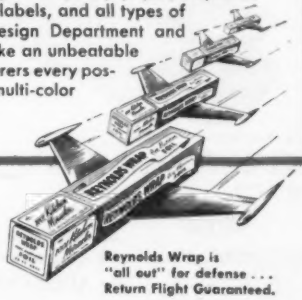
REYNOLDS

OF REYNOLDS FACILITIES CIVILIAN PACKAGING

Reynolds pioneered in developing for American merchandisers the two-fold advantage that aluminum foil possesses in highest degree: (1) protection against moisture, light, odors; (2) the eye-appeal and sales-appeal of rich colors on bright metal. Reynolds leads in all phases of this field . . foil rolling, laminating, package design, high-speed colorgravure printing on foil, and adaptation to standard high-speed packaging machines. Manufacturers having any design or technical problems involving present or future packaging sales will find Reynolds glad to be of assistance. Converters will also want to take advantage of the knowledge and experience of Reynolds technicians.

FOR YOUR PAPER LABELS AND WRAPS USE THE NATION'S LARGEST ROTOGRAVURE PRINTERS

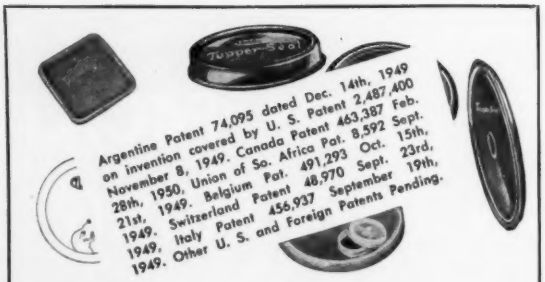
Reynolds, the largest supplier of beer labels, has four large modern printing plants, strategically located across the country. Supplied with continuous tonnages of quality paper, Reynolds offers superior service on paper labels, and all types of large run printing. Reynolds Design Department and unequalled printing facilities make an unbeatable combination, assuring manufacturers every possible advantage in highspeed, multi-color gravure production.



Reynolds Wrap is "all out" for defense . . . Return Flight Guaranteed.

ALUMINUM

Tupper Seal, air and liquid tight flexible covers fit, and are included in the sets of all Tupperware Canisters.

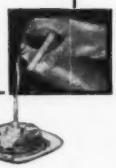


Argentine Patent 74,095 dated Dec. 14th, 1949 on invention covered by U. S. Patent 2,487,400 November 8, 1949. Canada Patent 463,387 Feb. 28th, 1950, Union of So. Africa Pat. 8,592 Sept. 21st, 1949. Belgium Pat. 491,293 Oct. 15th, 1949. Switzerland Patent 48,970 Sept. 23rd, 1949. Italy Patent 456,937 September 19th, 1949. Other U. S. and Foreign Patents Pending.

There's a Tupper Seal, air and liquid-tight flexible cover for Tupperware 2, 5, 8 and 12½ oz. Tumblers too, and these Tupper Seal, covers fit many other containers of metal, glass and crockery.

TUPPER / Seals

air and liquid-tight, flexible covers for Tupperware Tumblers, Canisters, Wonder Bowls, Cereal Bowls and many another container of glass, metal and pottery, the contents of which it is desired to keep fresh and wholesome.



TUPPER!

The Tupperware 50 oz. Canister is "standard equipped" with the Tupper Seal, air and liquid-tight flexible Pour All cover.

The Tupper Seal, air and liquid-tight flexible Por Top cover, specially designed as a dispensing cover for specified diameters of containers holding foods such as syrups, salad dressings, catsup.

The Tupper Seal, air and liquid-tight flexible Pour All cover is used on every Tupperware 20 oz. Canister.

The cover of the Tupperware Bread Server which serves as a bread tray also is designed to give similar results as Tupper Seal, air and liquid-tight Flexible covers. Keeps contents fresh as no other such container.

FORMAL NOTICE! 9th November, 1949

EXCLUSIVE!

U. S. Patent #2,487,400

The Tupper Corporation has attained a position of leadership in this industry by incurring great expense and expending painstaking effort in the development, design, manufacture and exploitation of its many world-known products.

The Tupper Corporation further has anticipated the inevitable attacks to which leadership is subject and has taken measures provided by law to preserve the creative rights to its products, methods and design by patent protection both in the United States and abroad.

Tupper Seals for Tupperware shown in this advertisement are just a few of the forms covered in this manner and are specifically covered by U.S. Patent #2,487,400.

Only the Tupper Corporation, by U.S.Patent #2,487,400 has the right to make, use and vend container closures in connection with any and all types of containers throughout the United States and its territories as covered by the claims of the Patent.

Tupper Corporation will protect, according to law, the exclusive rights above granted

TUPPER CORPORATION

The Tupper Seal, air and liquid-tight, Pour All cover as a cover for 46 oz. cans; Tupperware Sauce Dishes and other containers of metal, glass or pottery. Foods easily dispensed without removing entire cover.

When equipped with Tupper Seal, air and liquid-tight, flexible covers, Tupperware Cereal Bowls serve many another purpose.

The Tupperware Wonder Bowls are usually fitted with Tupper Seal, air and liquid-tight covers.

The Tupper Seal, air and liquid-tight flexible cover made for Tupperware 8 oz. Tumblers also fits and is sold with all Tupperware Funnels as a base when funnels are used as storage containers.

TUPPER

TUPPER CORPORATION

Manufacturers of — CONSUMER, INDUSTRIAL, PACKAGING AND SCIENTIFIC PRODUCTS

FACTORIES: Farnumsville, Mass., and Cuero, Texas **New York Show Rooms 225 Fifth Ave.**

ADDRESS ALL COMMUNICATIONS TO: Department A

COPYRIGHT TUPPER CORPORATION 1950

Sheffield tubes... *right* for your product

Sheffield is privileged to supply this handsome collapsible tube for Rexall's new toothpaste. Our century-long association with the noted firms of the drug world is based on ability to produce tubes of brilliant finish and positive product protection... tubes of outstanding merchandise appeal. For tubes that are exactly right for your product, order Sheffield tubes.

THE SHEFFIELD TUBE CORPORATION

HOME OFFICES: NEW LONDON, CONN.

SALES OFFICES:

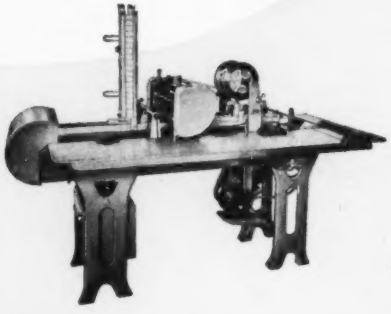
NEW YORK • CHICAGO • LOS ANGELES

ANY TYPE
WRAP
IS A
Scandia
TYPE
JOB!

FOIL WRAPPING ~ *with* PUSH-BUTTON *registration!*

Handling foil with the same precision and the same material-savings as it does when using Cellophane, Scandia's were selected to wrap Ansco's new film packs. And note the excellent registration. *Be sure to make YOUR packages*

a SCANDIA* assignment



Scandia units are used for better wrapping, bundling, banding.

*Manufactured under Bronander patents.

Scandia MANUFACTURING COMPANY

501 Belleville Turnpike • North Arlington, N. J.

The Handiest
Bottle Ever Made!
Manufactured Under Pat. No. 2,515,093
Other Patents Pending
ELMER E. MILLS CORPORATION'S
Polyethylene
Plastic Bottle
This is *the* bottle with consumer appeals so strong they actually help sell your product!
It's unbreakable—a powerful consumer selling point on safety and thriftiness.
It's lightweight—takes up less space (and incidentally cuts your shipping cost).
It's a "squeeze bottle"—can be readily adapted to use as a stream—as a spray—as a sprinkler finish.
Our stock bottle is available in 1—2—4—8 ounce sizes. Through a special printing process we can print your label or design right on the bottle.
In addition to the production of this stock bottle and stock closure, we also custom make other thermoplastic bottles, closures and atomizers. You can depend upon their being made with the same high standards of craftsmanship which keynote all Mills plastic products.
For more information on our custom molding service, or for a free sample bottle, write us or our sales agent today.
ELMER E. MILLS CORPORATION
2930 N. Ashland Ave., Chicago 13, Illinois
Sales Agent: W. BRAUN & COMPANY
Chicago, 500 N. Canal St. New York, 595 Fifth Ave.

". . . $26,500,000 worth of U.S. Savings Bonds a year under company Payroll Savings Plan . . ."

CHARLES E. WILSON

"General Electric employees are buying more than $26,500,000 worth of U. S. Savings Bonds a year under company payroll savings plans. Since the inception of our savings plans in 1917, General Electric employees have saved $445,000,000 of which $280,000,000 consisted of the purchase of United States Savings Bonds since May, 1941. The record speaks for itself."

The record of General Electric Company, and the records of more than 21,000 other large companies, prove that employees *want* to save the easy, automatic way—the Payroll Savings Plan.

As of November 1, 1950, more than 8,000,000 employees were buying U. S. Savings Bonds *every month*. While the figure was impressive, it was not as large as it should have been—a fact recognized by many companies.

In November and December, top executives of literally thousands of large companies (employing one hundred or more) decided to check their Payroll Savings Plan and endeavor to increase participation to 60% or more.

Here are a few December reports: in one of the larger units of a leading steel corporation, participation went from 20% to 80.6 per cent . . . a well-known independent steel company (13,710 employees) reported 82% participation . . . another large steel company (100,000 employees), 75% participation . . . one plant of a large rubber corporation climbed to 94% (company average, all plants, 70%—and still going up). Tabulation of all companies exceeding 60% participation in December would literally fill this page.

Higher participation in the Payroll Savings Plan is good for the men and women for whom it builds security. It is good for the company because a saving employee is a better workman, a better citizen. It is good for the country because the month after month purchase of U. S. Savings Bonds by millions of Americans is a most effective check on inflationary tendencies.

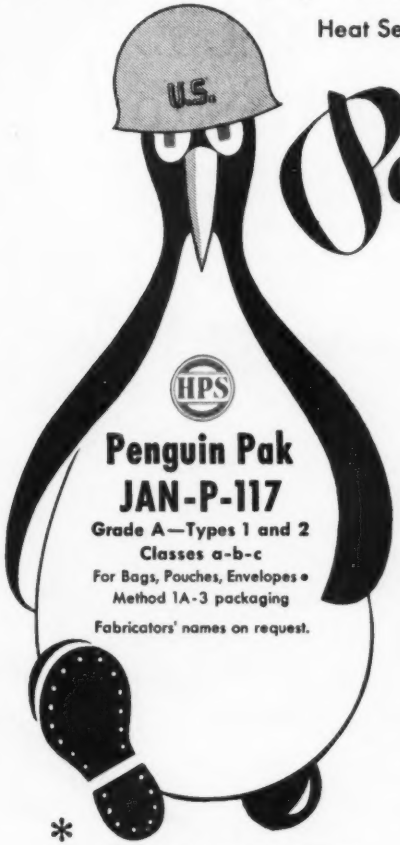
Phone, write or wire, now, to Savings Bond Division, U. S. Treasury Department, Suite 700, Washington Building, Washington, D.C. Your State Director has a simple, four-point promotion plan, concluding with a person to person canvass that puts a Payroll Savings Application Blank in the hands of every employee. That's all you have to do—and you'll be surprised at the response from employees who *want* to save.

The U. S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

for sub-zero export packaging...

Heat Sealed Bags and Pouches

POLYETHYLENE (LOXOL* PROCESS) COATED KRAFT



Penguin Pak 1 and 2

FLEXIBLE TO 65° BELOW ZERO

Formerly LOXOL T1-91-75

Heat Sealable • Greaseproof • Waterproof

Here is the perfect wedding* of thermoplastic to paper with every value of Polyethylene retained; protective, moldable, pliable. Penguin Pak is one of a line of HPS protective wrappings for meeting many JAN requirements.

Penguin Pak JAN-P-117
Grade A—Types 1 and 2
Classes a-b-c
For Bags, Pouches, Envelopes • Method 1A-3 packaging
Fabricators' names on request.

Sara Pak 1 and 2 SARAN (LOXOL PROCESS) COATED KRAFT
JAN-P-117 • Grade A • Types 1 and 2 • Classes a-b-c and d. Resistant to oils, acids, alkalies, salt solutions, corrosive liquids, etc. Low WVTR, inert, pliable, heat-seable for bags and pouches. Folds and creases without injury.

Arctic Pak 1 • Flat POLYETHYLENE (LOXOL PROCESS) COATED KRAFT
JAN-B-121 • Grade A • Type 1 • Class 1. Flexible to 65° below zero. Heat Sealable, greaseproof, waterproof.

Arctic Pak 2 • Flat POLYETHYLENE (LOXOL PROCESS) COATED KRAFT
JAN-B-121 • Grade A • Type 2 • Class 1. Flexible to 65° below zero. Heat Sealable, greaseproof, waterproof.

Arctic Pak 1 • Creped POLYETHYLENE (LOXOL PROCESS) COATED KRAFT
JAN-B-121 • Grade A • Type 1 • Class 1. 15% stretch; molds to any contour, Heat Sealable, greaseproof, waterproof.

Lamine 1 GLASSINE LAMINATED TO KRAFT
JAN-B-121 • Grade A • Type 1 • Class 1. High tensile strength; greaseproof.

Lamine 2 GLASSINE LAMINATED TO KRAFT
JAN-B-121 • Grade A • Type 2. Class 1. High tensile strength; greaseproof.

Self Wrap WAX-IMPREGNATED NEUTRAL KRAFT, CREPED.
JAN B-121 • Grade A • Type 2 • Class 2. Extremely moldable for conforming to, and holding shape of almost any form.

* The LOXOL PROCESS, another HPS development, perfectly unites base stock and thermoplastic resins by hot-melting to paper, fabric, or foil. Laminants and residual solvent odors are eliminated, pin holes are unknown, all the resin's values are retained. Write for complete information.

*LOXOL T. M. Reg.

Write HPS
for samples and specifications on
BARRIER MATERIALS
For Government packaging.

H. P. SMITH PAPER CO.
MANUFACTURERS
IMPREGNATORS · LAMINATORS · COATERS · PAPER · FABRIC · FOIL
5007 WEST SIXTY-SIXTH STREET • CHICAGO 38, ILLINOIS

Makes salads "just right"....
and sandwiches, too!
Yes, housewives know how to perk up small fry and grown up appetites. They serve taste-rich salads and plump, flavorful sandwiches. And they top them with Mrs. Filbert's* egg-rich, real-lemon flavored Mayonnaise or smoothly blended Salad Dressing.

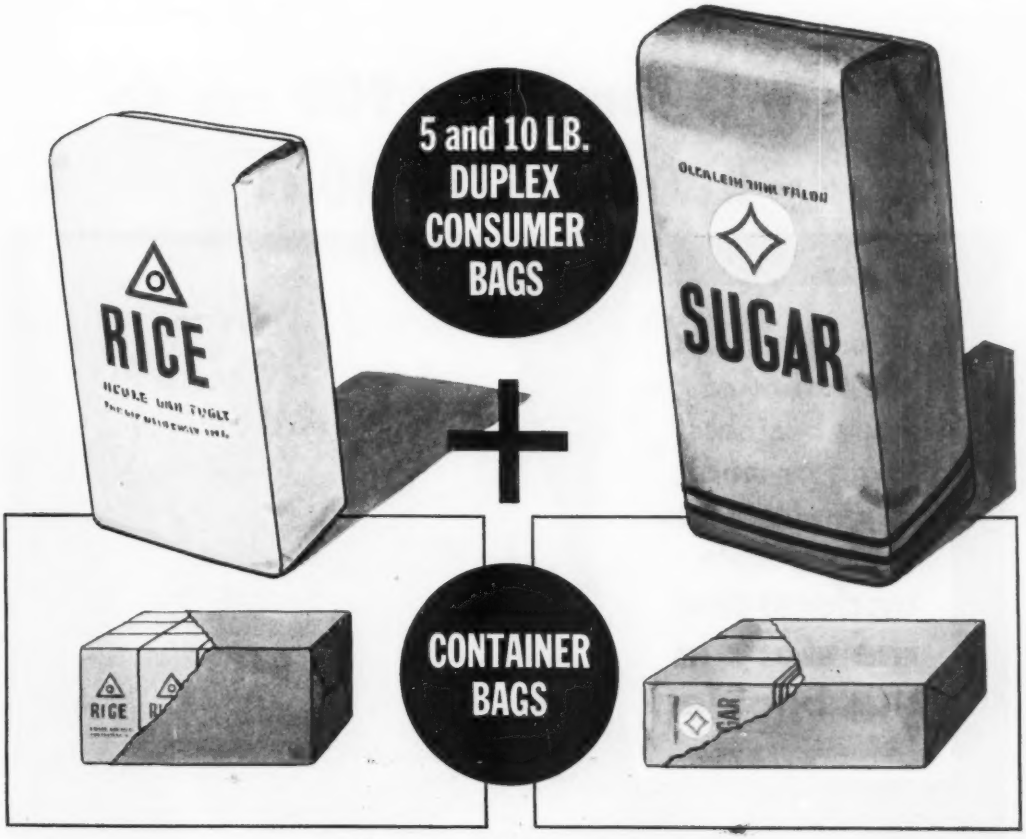
Leading food packers come to Crown for closures that are "just right" for their specific products. Crown maintains a fully equipped Customer Service Laboratory. Here, by working with customers' products, we are able to help them select the closure and liner best suited to their needs. This service is at your disposal without cost or obligation. Why not take advantage of it? Crown Cork & Seal Co., Baltimore 3, Md.

World's Largest Makers of Metal Closures.

CROWN CLOSURES

Approved by millions of housewives

* Mrs. Filbert's Mayonnaise and Salad Dressing are packed by J. H. Filbert, Inc., Baltimore, Maryland. Crown Mason Caps and Crown Lug Caps are used to seal these products.



TO SERVE YOU BETTER . . . International Paper Company has added 5 and 10 lb. Duplex Consumer Bags to its line of Container Bags.

If you package sugar, salt or rice in consumer bags, you can now take advantage of this latest addition to the Bagpak line of better bags.

Get both from

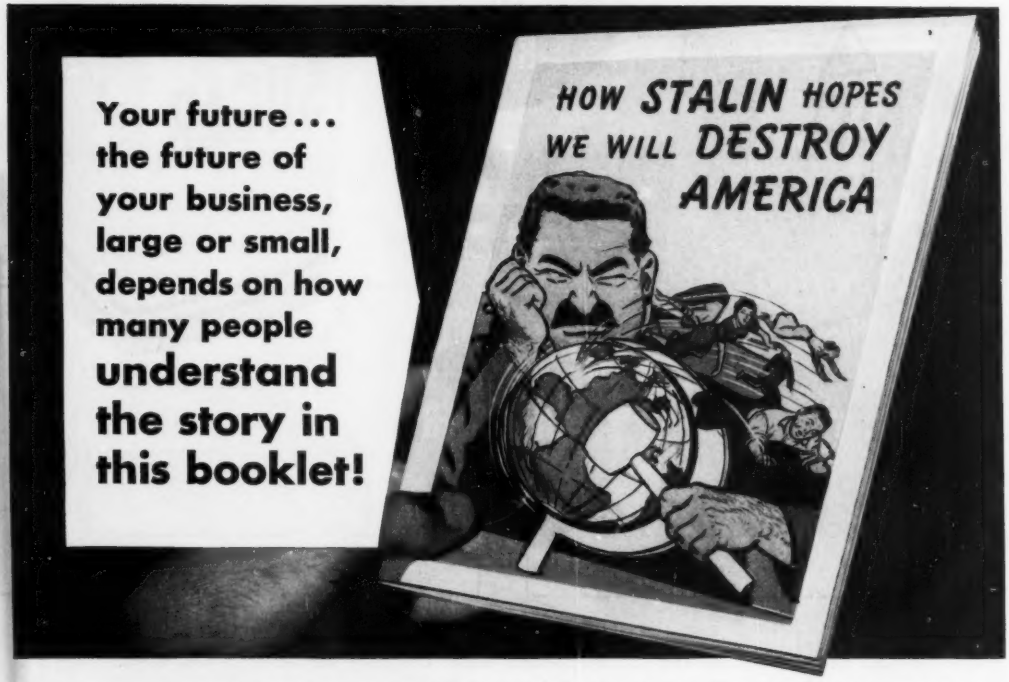
International Paper Company

BAGPAK DIVISION

220 East 42nd St., New York 17

BRANCH OFFICES: Atlanta • Baltimore • Baxter Springs, Kansas • Boston • Chicago • Cleveland • Denver • Los Angeles • New Orleans • Philadelphia • Pittsburgh • St. Louis • San Francisco.
IN CANADA: The Continental Paper Products, Ltd., Montreal, Ottawa.

There IS something YOU can do ABOUT INFLATION!


Your future... the future of your business, large or small, depends on how many people understand the story in this booklet!
HOW STALIN HOPES WE WILL DESTROY AMERICA

Businessmen recognize ***inflation*** *as the nation's greatest single threat. But most of us have felt "What can one man—even one business—do to stop it?"*
But there is a way—if enough of us work at it. We can help more people . . . the men and women who work and vote and pay taxes . . . to understand the nature of inflation, its ***causes*** *and* ***cures****. Then we will have gone a long way toward eliminating this pending catastrophe.*

ONE TOOL YOU CAN USE: To help us give our own Bemis workers the inflation picture, we used the colorful, new 16-page booklet "How Stalin Hopes We Will Destroy America" produced by Pictorial Media, Inc. The more widely the booklet is used, the more good it will do . . . and it is available for distribution to your workers, too. It follows the time-proven "comic book" technique . . . dramatizes the dangers . . . and shows how all our citizens can help halt inflation before it's too late.

TESTS SHOW IT HELPS WORKERS: To get an impartial judgment of the value of "How Stalin Hopes We Will Destroy America," it was tested in Bemis plants by the Psychological Corporation under the direction of Dr. Henry C. Link, a foremost research authority. Dr. Link says "Those workers exposed to the booklet were found to have a significantly higher appreciation of the recommended ways to stop inflation than did the workers who did not see the booklet. Details of this test are available upon request." And Bemis factory workers make such statements as "Everything it says hit home, but you'd never figure it out for yourself until you read it"...."It's told in an interesting way so anyone can understand. My daughter, age ten, understood all of it"..."In picture form it impresses you more. Most people don't read about it"..."Had ideas that we wouldn't think about otherwise while we are working away—good book, agree with it—I guess I won't be the only one."

Because we believe this message is growing more urgent every day, Bemis is taking this means to commend to other businesses this weapon against inflation. It is the first of a series of such material that we expect to use.

BEMIS BRO. BAG CO.
St. Louis 2, Missouri

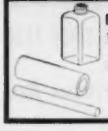
FOR EVERY BUSINESS, LARGE OR SMALL: In quantities, it costs only a few cents a copy—$10.00 for 100 copies, down to 3 cents per copy in larger quantities. Single copy free. For full information, write PICTORIAL MEDIA, INC., Attention: Paul Wheeler, 205 E. 42nd ST., NEW YORK 17, N.Y.

You'll make a
BIG SPLASH
with COLOR!
printing company
OF CELLOPHANE, ACETATE and GLASSINE SINCE 1936
COLUMBUS, GEORGIA
Sales Offices: Dallas, Texas—Charlotte, N. C.—Jackson, Miss.

For The Blatz Brewing Company which uses Standard-Knapp packers and conveyors in its new bottling plant. "We certainly are happy," reports Blatz, "with the performance which our Standard-Knapp equipment has rendered during three years of operation in our new bottling plant. This department has recorded an amazingly high degree of efficiency in regular evaluations and much of that efficiency is due to the continued and dependable operation of Standard-Knapp packers."

Only the best is

OTHER EMHART PRODUCTS INCLUDE:

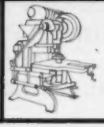


PLASTIC BOTTLES, RODS, TUBES, SPECIAL SHAPES

PLAX CORPORATION

Subsidiary of Emhart Mfg. Co.

HARTFORD 1, CONNECTICUT



PREMIUM QUALITY STAMPING PRESSES

THE V & O PRESS CO.

Division of Emhart Mfg. Co.

HUDSON, NEW YORK

HIGH SPEED AUTOMATIC PRESSES

HENRY & WRIGHT

Division of Emhart Mfg. Co.

HARTFORD 5, CONNECTICUT

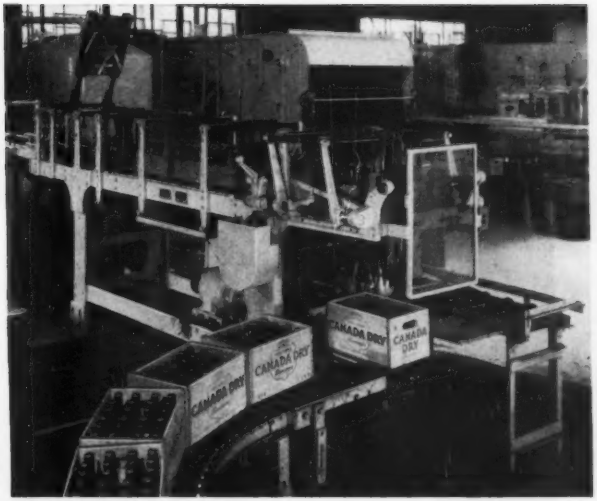
GLASS MAKING MACHINES

HARTFORD-EMPIRE CO.

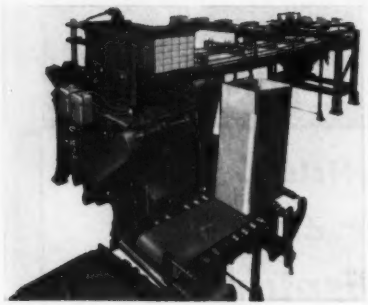
Division of Emhart Mfg. Co.

HARTFORD 2, CONNECTICUT

In the field of automatic packaging equipment



For Canada Dry where Standard-Knapp bottle packers help this famous company maintain its production lines at top efficiency. Standard-Knapp bottle packers—and other automatic packaging machines—are the choice of leaders in every field seeking speed and dependability now and for the years ahead.



For American Tobacco which keeps its packaging lines moving at peak efficiency with the aid of Standard-Knapp gluers and sealers, collectors and carton packers. In the field of automatic packaging, Standard-Knapp machines are automatically preferred.

For The Food Industry

Standard-Knapp machines are automatically and efficiently unloading empty bottles . . . rinsing glass containers . . . labelling cans and bottles . . . packing filled cans, bottles, cartons and bags into shipping cases . . . gluing and sealing shipping cases . . . printing, coding and dating.

good enough

FACT-PACKED CATALOGS

Want to review Standard-Knapp automatic packaging machines in detail? Our catalogs will give you some eye-opening facts.

Please write Dept. P, Standard-Knapp, Portland, Connecticut.

STANDARD-KNAPP

DIVISION OF
EMHART MFG. CO.

PORTLAND, CONNECTICUT

Package These NOTIONS Components in CLEARSITE:

Buttons • Fasteners • Hooks & Eyes • Thread • Sewing Kits • Findings • Millinery Findings • Beads • Jewelers' Findings • Safety Pins.

Endow your products with these sales advantages of CLEARSITE:

- **Shatterproof**
- **Flexible or Rigid**
- **Dimensionally Uniform**
- **Permanently Printed**
- **Featherlight (¼ the weight of glass)**
- **Clear or Opaque in All Colors**

CLEARSITE definitely enhances product value; it looks expensive but really isn't.

In the Notions Field...

Point-of-Sale

Play Up A Display

Your Products are Clearly, Compactly, and Conveniently Displayed in CLEARSITE and achieve a Plus-Value that Makes Your Prospects Want to BUY.

CLEARSITE Plastic Selling Containers project your products to your customers. Your products are enhanced by CLEARSITE'S clear or gemlike colors, its luxurious appearance, its sparkle and freshness, and its usefulness as a handsome, permanent storage and re-use vial. Your name remains with your customer and insures repeat sales even after the contents have been removed.

Send us samples of your products. We'll return each one in a CLEARSITE Container. Or, write for data-packed literature that details the uses and advantages of CLEARSITE *Plastic* Selling Containers.

CLEARSITE is made only by

CELLUPLASTIC CORPORATION 34 Avenue L, Newark 5, N. J.

America's #1 Source for Plastic Containers • Est. 1919

Milwaukee • Los Angeles • Detroit • New Haven • Cleveland • Denver • Minneapolis • Cincinnati • Atlanta • Houston • Chicago • Jacksonville • Ft. Worth • St. Louis • San Francisco • Phoenix • Seattle • Portland • Louisville • Jackson • Richmond • Montreal • Toronto

YOUR MILPRINT MAN CAN HELP YOU CHOOSE THE RIGHT TYPES OF PACKAGES TO SUIT YOUR PRODUCTS AND PRODUCTION METHODS

Nowhere is the choice wider than at Milprint. For more than 50 years Milprint has been developing flexible packages in a wide variety of forms to help you get the *right* packages and the *right* results wherever you sell them. ★ Your Milprint man is no "one tune Charley." He knows packaging machinery and methods—knows which products in Milprint's vast line to suggest. Whatever your problem—it's just good business to call your Milprint man—*first*. There's no obligation.

SEE MILPRINT FOR MILITARY PACKAGING

Milprint's tremendous production facilities and versatile operations are being widely used by many branches of the services for Military Packaging. The strategic location of 14 plants and the technical "know-how" of the Milprint organization are at your disposal. Write, wire or call Milprint regarding your Military packaging problems.

General Offices: Milwaukee, Wis. ★ Sales Offices in Principal Cities

Milprint INC.

PACKAGING MATERIALS

LITHOGRAPHY & PRINTING

Printed Cellophane, Pliofilm, Polyethylene, Acetate, Glassine, Foils, Folding Cartons, Lithographed Displays, Printed Promotional Material

This insert printed by Milprint, Inc.

NECK AND SHOULDER LABELS

MEDALLIONS

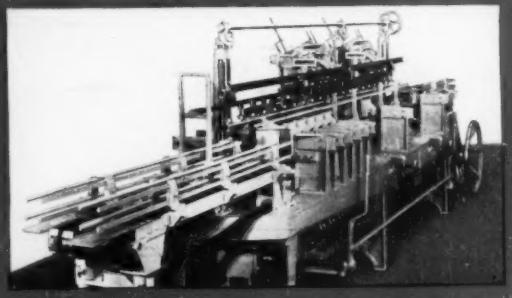
"YOU GET THE BEST LABELERS IN THE WORLD"

WORLD LABELERS

BEE-LINE

is the Labeler to do a clean, smooth, precision job on all manner of glass containers . . . from ounces to gallon jugs. Production up to 2 a second, and more.

Built in three models to cover a great range of label and container styles and sizes.



ECONOMIC MACHINERY COMPANY
WORCESTER 3, MASSACHUSETTS
DIVISION OF GEO. J. MEYER MANUFACTURING CO.
MILWAUKEE, WISCONSIN

New York • Philadelphia • Chicago • San Francisco • Los Angeles • Denver
Salt Lake City • Seattle • Portland • London • Montreal • Toronto
Winnipeg • Vancouver • Mexico City • Sydney, Australia
Wellington, N. Z. • San Juan, P. R. • Ciudad Trujillo, D. R.

All proven sales makers, these window bags with Celanese* acetate windows are manufactured by E. S. & A. Robinson, Leaside, Toronto.

ACETATE WINDOWS

Give Bags Stronger Sales Appeal

Acetate windows are always clear, always smooth. They pose none of the problems so frequently encountered in window bags.

NO STORAGE PROBLEM—
Acetate remains flat and unwrinkled.

ALWAYS CRISP AND CLEAR
Acetate is unaffected by moisture, grease and juices.

Enjoy economy of long production run with Celanese acetate transparent films that do not deteriorate with age. Celanese acetate is sold under the trade mark Lumarith*.

Celanese Corporation of America, Plastics Division, Dept. 108-H 180 Madison Avenue, New York 16, N. Y. In Canada, Canadian Cellulose Products Ltd., Montreal and Toronto.

*Reg. U.S. Pat. Off.

Celanese® Acetate
TRANSPARENT FILM

AN ORIGINAL LITHOGRAPH BY HENRY E. WINZENRIED

"IN THE GOOD OLD SUMMER TIME"*

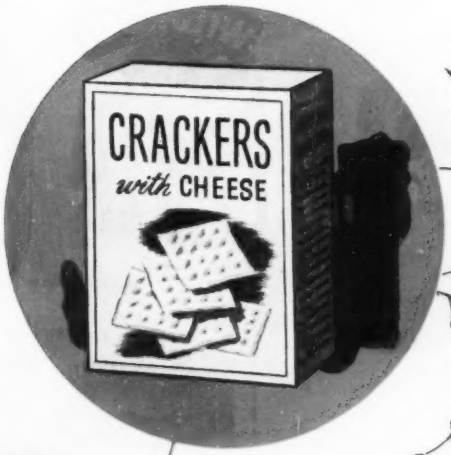
Summer brings a change of scene . . . kids racing out to the ice cream man . . . clamoring for sweets from morning 'til night. It is an old familiar scene, and behind it lie many special Riegel Papers. You will find them hard at work protecting the freshness and flavor of ice cream, candy, cookies, cake, gum, potato chips, popcorn, soft drink powders and many other good things to eat.

Literally hundreds of Riegel papers, for almost any kind of protective packaging, are now serving the sales leaders in many different fields. We are constantly developing even more varieties, in spite of present conditions, for companies who join us now in planning for the future. Write for information.

Riegel Paper Corporation • 342 Madison Avenue, New York 17, N. Y.

*Permission Granted by Edward B. Marks Music Corporation

Riegel TAILOR-MADE PAPERS FOR PROTECTIVE PACKAGING



Swift's Adhesives help you...

and please Dad, too!

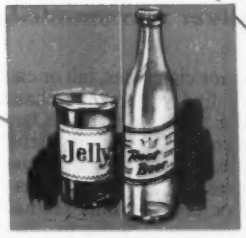
Whether he knows it or not, when Dad takes time out to enjoy a snack, almost all his foods and beverages are packaged neatly and cleanly with the aid of different adhesives.

Among them probably are Swift's Adhesives — special ones for canners, food packagers and bottlers. Our years of adhesive experience, our wide range of raw materials can help you find the adhesives that fit your requirements . . . and lower your operating cost.

Two of Swift's many special adhesives for packaging operations.

#1262 — Liquid adhesive for top and bottom sealing and titewrap work. A fast-setting, non-warp type adhesive that is clean machining.

Textite Flexible Glue — For quality setup box work. In convenient cake form — it is a non-warp type, light colored for finest work. Economical because of its better coverage.



Call SWIFT for ADHESIVES

Swift & Company
Adhesive Products Department
Chicago 9, Illinois

This offer expires September 30, 1951

Please send your 100 lb. introductory trial shipment of

☐ Swift's #1262 Adhesive
☐ Swift's Textite Flexible Glue

} At the quantity price

These will be tested for use in our operations. We understand, if not fully satisfactory, they may be returned for credit at your expense.

Name_____ Title_____
Firm Name_____
Address_____
City & State_____

MP-9

LOOK FOR THE MAN FROM FORBES

. . . to deliver merchandising impact

Shaving cream or cigarettes, ink or candy—whatever your product, you'll find you get merchandising impact when you get the Facts from Forbes. Our customers find our long experience plus continuing studies of printed merchandising effectiveness are their assurance of the best printing process for any job — runs of any length, production only or creative-plus-production. What's more, Forbes offers unique facilities in lithography, letterpress, rotogravure and die-stamping — all under one roof and one-management control.

Displays

Floor Stands

24-Sheet Posters

Transparent Cellulose Wraps

Basket Merchandisers

Cookbooks, Booklets, Folders

Car Cards

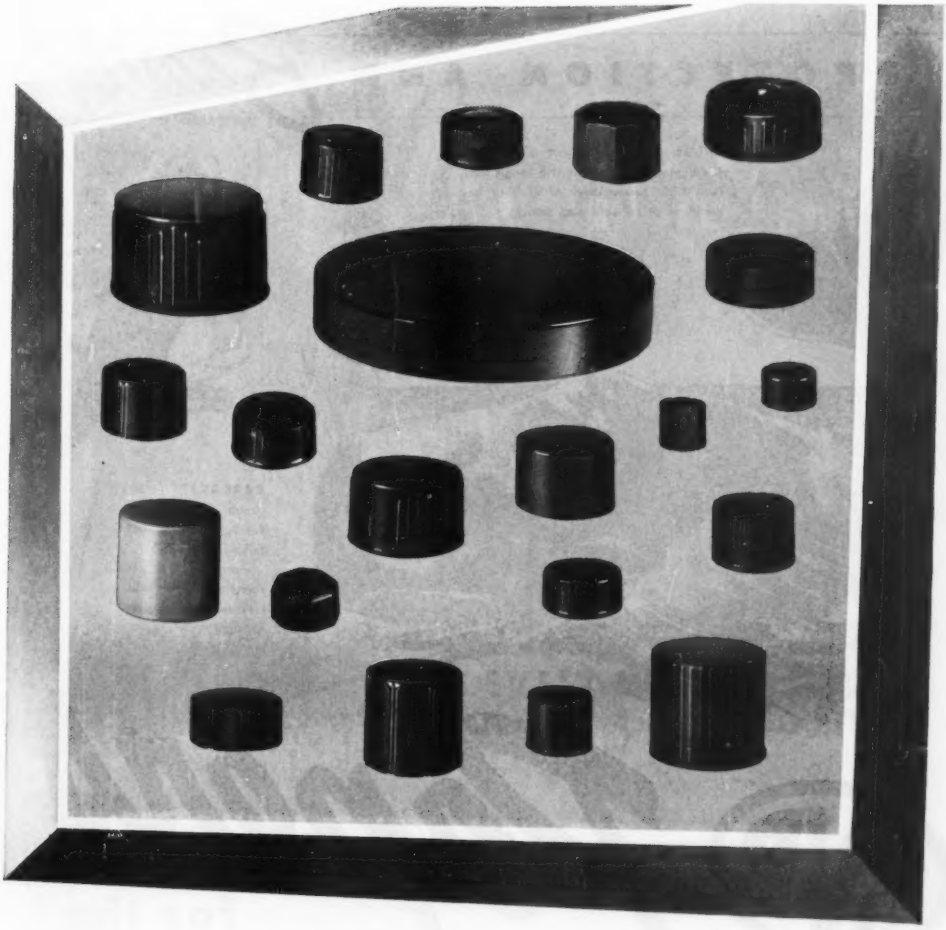
Calendars

Holiday Sleeves

FORBES LITHOGRAPH CO.

NEW YORK • CLEVELAND • BOSTON • CHICAGO • ROCHESTER

Delivers Merchandising Impact



There's a cap here for your container!

This illustration shows the Armstrong's Line of Artmold® Plastic Caps that come in a range of sizes from 8 mm to 100 mm.

These handsome caps meet the requirements of all G.C.M.I. standard finishes for bottles, vials, and jars. They're chip and crack resistant. They have a brilliant, durable luster and can be made in a wide range of sparkling colors to fit your container needs.

You can get prices and free samples by writing to Armstrong Cork Company, Glass and Closure Division, 5908 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S
Artmold
PLASTIC CAPS

PROTECTION AND *Beauty*

WHALE — A mammal, not a fish, and the biggest in the ocean. His tough hide and thick, heavy layer of blubber beneath ward off cold and attack.

PARRAKEET — The junior of the parrot family. A clever little fellow with colorful, vivid plumage and sometimes a vocabulary to match.

KVP *Papers* for the FOOD INDUSTRY

The average housewife takes a realistic view towards today's higher food prices. She simply shops more carefully. Food flavor, cleanliness, and wholesomeness are more important than ever. Please her on these counts, and you've won a steady customer.

KVP Papers can help you. They are made especially for food preservation. You can get them in sheets or rolls to protect every product you process. To complete the job, KVP artists and printers can add colorful design whenever it's a sales advantage for you.

INDUSTRIES SERVED

BAKING
Bread — Cracker
Cereal

MEAT
Packing — Locker
Retail

DAIRY
Butter — Cream — Cheese
Ice Cream — Milk

FISH • FRUIT • FROZEN FOODS
POULTRY • SHORTENING • VEGETABLE

Kalamazoo Vegetable Parchment Company
PARCHMENT • MICHIGAN

ASSOCIATED COMPANIES:
KALAMAZOO VEGETABLE PARCHMENT CO., DEVON, PENNA.
KVP COMPANY OF TEXAS, HOUSTON, TEXAS
HARVEY PAPER PRODUCTS CO., STURGIS, MICHIGAN

IN CANADA:
THE KVP COMPANY LIMITED, ESPANOLA, ONTARIO
APPLEFORD PAPER PRODUCTS LIMITED,
HAMILTON, ONTARIO • MONTREAL, QUEBEC

For the Best . . call Cleveland . .

CLEVELAND CONTAINERS

lead the *Offensive* against loss

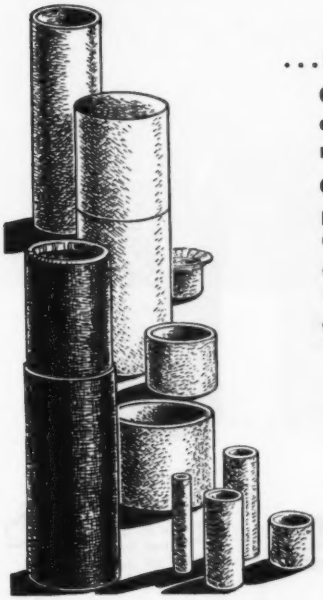
or damage to parts in transit.

. . . Note these factors for faster assembling and forwarding.

CLEVELAND CONTAINERS possess real strength and rigidity of construction. They have extreme flexibility of design and a wide range of sizes.

Our Immense Plant Production LOWERS COSTS and our convenient production facilities aid the manufacturer to maintain schedules. Our Containers speed up spare parts packaging. Our Plugs, Sleeves and Caps protect threads and parts against damage.

Consult us on your needs. Samples and suggestions await your command.



The CLEVELAND CONTAINER Co.

6201 BARBERTON AVE. CLEVELAND 2, OHIO

- **All-Fibre Cans • Combination Metal and Paper Cans**
- **Spirally Wound Tubes and Cores for all Purposes**

PLANTS AND SALES OFFICES: Cleveland, Detroit, Chicago, Plymouth, Wisc., Jamesburg, N. J., Ogdensburg, N. Y. • ABRASIVE DIVISION at Cleveland SALES OFFICES: Grand Central Terminal Bldg., New York City; Washington Gas Light Bldg., Washington, D. C.; West Hartford, Conn.; Rochester, N. Y. Cleveland Container Canada, Ltd., Prescott, Ontario • Offices in Toronto and Montreal

Reprinted from the July, 1951 issue of Modern Packaging magazine. Copyrighted. All rights reserved. Modern Packaging Corp., 575 Madison Ave., New York 22, N. Y.

The Rough Rider was President when we shipped our First Can ...

A HALF CENTURY OF METAL PACKAGING

1901 1951

TEDDY ROOSEVELT went into the White House in 1901. That year Heekin shipped its first tin can from a little building, powered with a water wheel fed from the Miami Lake Erie Canal. Today, Heekin operates from tremendous can manufacturing plants and warehouses to serve its customers with plain or lithographed cans. In 50 years we have learned a lot about serving our customers. That's why there's a "plus service" for Heekin customers that is yours for the asking. Heekin is not the largest can manufacturer, but is one of the best.

METAL CONTAINERS LITHOGRAPHED OR PLAIN

1901 1951

HEEKIN CANS

THE HEEKIN CAN CO., CINCINNATI 2, OHIO

PLANTS AT CINCINNATI AND NORWOOD, OHIO; CHESTNUT HILL, TENNESSEE AND SPRINGDALE, ARKANSAS

In 1901, the Floradora Sextette thrilled the country and New York adopted the first automobile license law.

A Top-Flight Line

Trojan

Heat Seal Papers

Manufactured by

The GUMMED PRODUCTS Company

TROY, OHIO

This is a printed sample of Trojan #770 FIREBIRD Heat Seal Paper, 60# Kromekote.*

* *Kromekote is the registered trade mark of the Champion Paper and Fibre Company.*

Trojan

Heat Seal Papers

For greater packaging production, for greater savings in labeling time, for permanent adhesion, for neater and cleaner packaging with more eye-appeal . . . use the great Trojan FIREBIRD Heat Seal Papers. Top flight . . . in printability, application, and appearance. Available for immediate delivery. Write today for samples and prices.

The GUMMED PRODUCTS Company

Offices • **TROY, OHIO** • Mills

CHICAGO • CINCINNATI • CLEVELAND • DETROIT
NEW YORK • PHILADELPHIA • SAN FRANCISCO • ST. LOUIS

This is a printed sample of Trojan #770 FIREBIRD Heat Seal Paper.

Want to Seal Corrugated Cases *Faster, Better, Cheaper?*

New 5-109 BOX-WELD sets in 15-20 seconds! 5-109 BOX-WELD'S special formula offers speeds comparable to any other case-sealing adhesive in use anywhere. Use it on your shortest compression units. Get 15- to 20-second bond of your corrugated cases.

New 5-109 BOX-WELD gives 100% bond on normal compression units! 5-109 BOX-WELD possesses extreme wet physical tack, assuring 100% bond off the end of all normal compression units — *even in many cases where containers are packed too full or not full enough* — and on difficult liners such as jute, and fourdrinier kraft.

New 5-109 BOX-WELD challenges comparison on a cost basis! Foolproof 5-109 BOX-WELD is ready for *instant use* — requires no tricky, laborious diluting. *Yet you don't pay for water!* 5-109 BOX-WELD contains over 50% solids, but is comparable in cost to ordinary adhesives containing only 30-35% solids. These higher solids permit lighter application, resulting in speed, bond and *dollars-and-cents savings* in mileage figures.

YOU'LL WANT TO KNOW MORE ABOUT 5-109 BOX-WELD AND OTHER UPACO ADHESIVES, CHECK THE COUPON, PASTE IT TO YOUR LETTERHEAD, AND MAIL . . . TODAY.

5-109 BOX-WELD

- ☐ 4-oz. sample
- ☐ 5-gal. test kit (at drum price)
- ☐ Technical data sheet
- ☐ Recommendations for _____ industry

INFORMATION ON ADHESIVES FOR GOV'T EXPORT PACKAGING

- ☐ Sealing "V" board (JAN-P-101)
- ☐ Water-resistant case liner (JAN-P-140)
- ☐ Free drawings on case liners and closures (JAN-P-140)
- ☐ Laminating "V" board (JAN-P-108)
- ☐ Labelling under U-M-186 and AXS-1472

UNION PASTE COMPANY,
1605 Hyde Park Ave., Hyde Park, Mass.

Gentlemen: Please send me material as checked:

NAME_____

FIRM_____

POSITION_____

ADDRESS_____

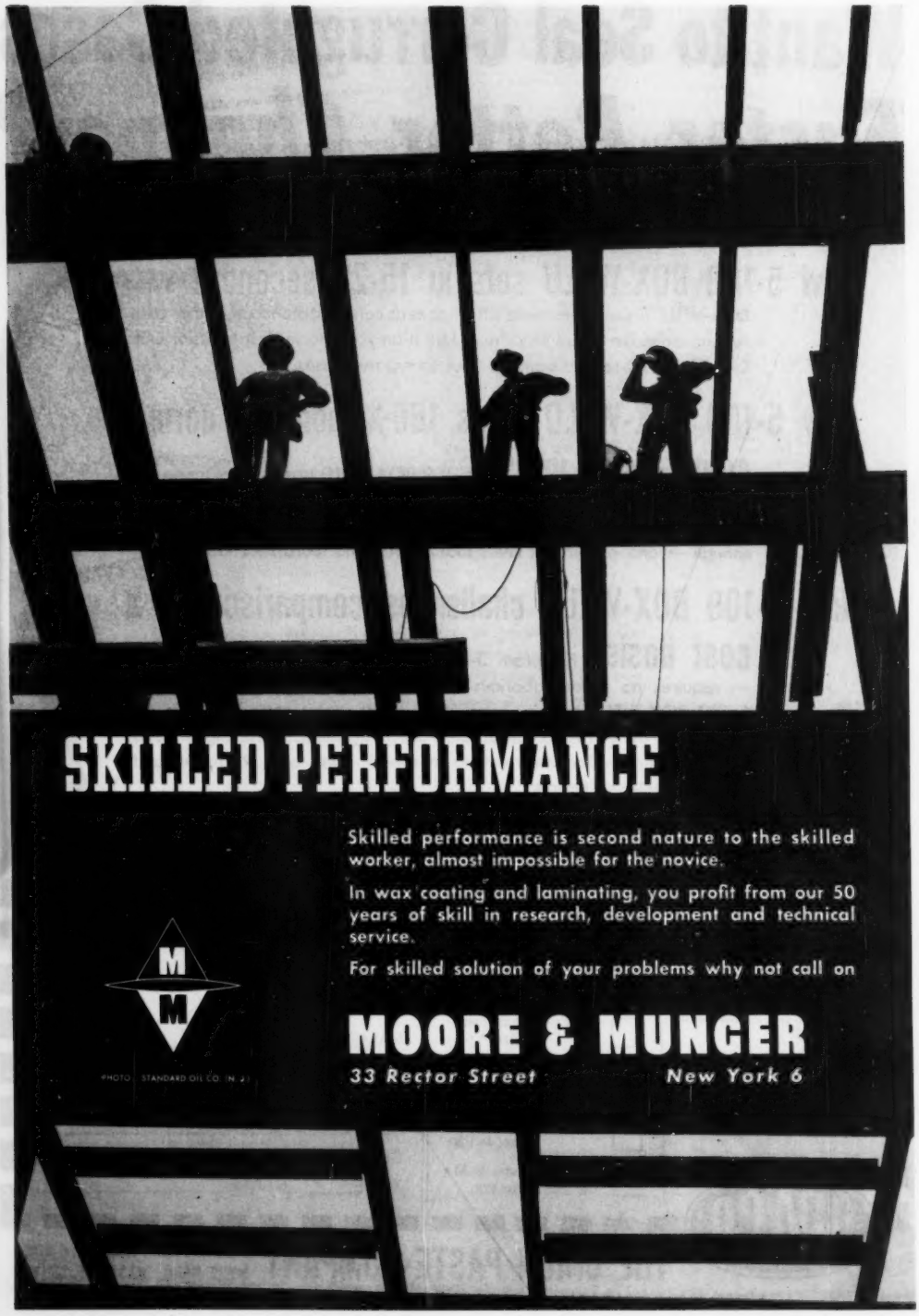
CITY_____

ZONE_____ STATE_____

UPACO

THE UNION PASTE COMPANY 1605 HYDE PARK AVENUE HYDE PARK, MASSACHUSETTS

5-109 BOX-WELD is manufactured by the F. G. Findley Co., Milwaukee and Houston, for Middle West distribution.


SKILLED PERFORMANCE
Skilled performance is second nature to the skilled worker, almost impossible for the novice.
In wax coating and laminating, you profit from our 50 years of skill in research, development and technical service.
For skilled solution of your problems why not call on
M
M
MOORE & MUNGER
33 Rector Street
New York 6
PHOTO STANDARD OIL CO. IN J.

Does your package land preferred position?

Making it easy for retailers to set up self-selling displays is vital today. A package that fits into simple, effective displays is bound to get preferred position in busy self-service stores.

How important this consideration can be is indicated by recent surveys in supermarkets. Two out of three purchases are decided *inside* the store, where displayed packages do nearly all the selling.

Does *your* present package lend itself to simple handling, quick price marking, easy stacking? This is one of twelve check points in "How To Rate Your Package Objectively," an easy-to-use guide for analyzing the self-selling job your package is doing. Write for this handy folder today. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Nemours Building, Wilmington 98, Delaware.

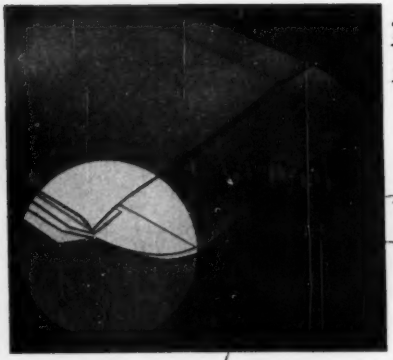
DuPont Cellophane

Shows what it Protects—Protects what it Shows

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY



The Vital Edges are Protected by 8 Plys of Heavy Glue-Reinforced Kraft Paper

It won't withstand an A-Bomb, but...

ANDREWS ARMOR-EDGE MAILERS TAKE ALL THE PUNISHMENT THE MAILS CAN DISH OUT

Toss it around. Bang the edges in. Drop it on one corner . . . and the Andrews Armor-Edge Mailer* *and its contents* come through unscathed. Designed to protect flat merchandise and printed matter from the rigors of mailing. Armor-Edge Mailers do their job at lower cost and with less handling than ordinary heavy protective wrapping.

Shift to Armor-Edge Mailers and you will eliminate nearly all complaints about mail being received in damaged condition.

Armor-Edge Mailers are not stock items. To give proper protection, sizes and flap styles must be designed to order. Why not ask for samples today. Then you'll be able to evaluate the merits of this superior mailer yourself.

for magazines

for ad mats

for booklets and reports

for flat packages of every sort

The present limited supply of paper may prevent us from serving you immediately. However, all inquiries will be given attention in order of their receipt.

* PATENT PENDING

P. L. ANDREWS CORP.

1328 Broadway New York, N. Y.

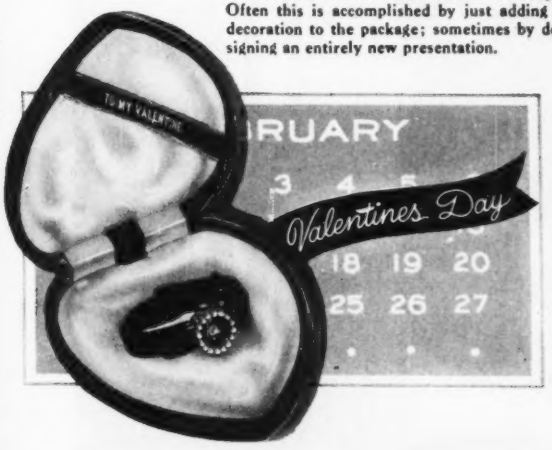
Manufacturers of a complete envelope line for over 30 years

Promote with Arrow Packaging

All Year Round

Timeliness is frequently the essence of dramatic packaging and sales-producing promotions... Today, keen merchandisers stimulate sales by creating packages that are appropriate for seasonal events and national holidays. Often this is accomplished by just adding a decoration to the package; sometimes by designing an entirely new presentation.

Arrow designers are skilled in such techniques, and Arrow facilities assure the just-right package, whether it be in plastic, wood, metal, cardboard or fabrics... Without obligation, you may call in an Arrow merchandising representative, who will be glad to consult with you on the best way to give *your* package timeliness.

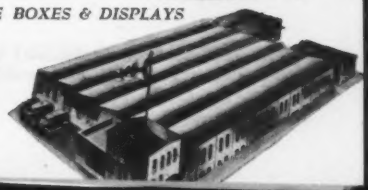


SINCE 1914 *SPECIALISTS IN THE DESIGN AND PRODUCTION OF DECORATIVE BOXES & DISPLAYS*

Arrow Manufacturing Company, Inc

567 Fifty-Second Street, West New York, New Jersey

Canadian Plant: 91 Brandon Avenue, Toronto, Ontario.



he can take it!

The package can also take it, because it's sealed with Stein Hall adhesives. We make them, dry or liquid, to conform to rigid U.S. Government specifications, and they're ready to protect your products the way they should be . . . ready to take the roughest handling.

Stein Hall laboratories developed its superior adhesive products during the last two World Wars for use by our Armed Forces. Consult your nearest Stein Hall office for information on the proper adhesive for defense packaging.

HALLMARK ® QUALITY PRODUCTS

STEIN SH HALL

285 MADISON AVENUE NEW YORK 17, N. Y.

ESTABLISHED 1866

Laboratories in Providence, New York, and Charlotte.
Branch offices in 16 cities in U. S. and Canada.

JUST THE THING

TO MAKE A

SALAD SING!

Battery of Pneumatic labelers in operation at plant in Bayonne, N. J. One of several locations where Pneumatic labeling and capping equipment has been installed for The BEST FOODS, Inc.

another popularity winner bottled by PNEUMATIC

No doubt about it — The BEST FOODS people know how to make a mayonnaise to tempt the popular taste. HELLMANN'S is their name for it, as millions of women will tell you.

The BEST FOODS, Inc., know more than a little about the best methods of bottling their famed product, too. From long, first hand experience they've learned you can do a neater, smoother job of capping and labeling, at a "lower cost per container", by using Pneumatic equipment.

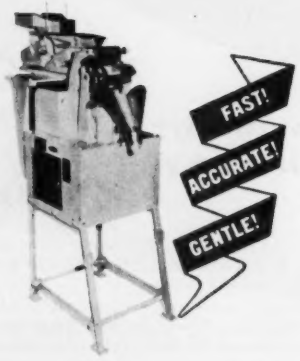
There are so many, many other concerns of similar character and high standing who share the same opinion about Pneumatic machines that it is important for you to know just why they feel that way. We'll be glad to fill in the details for you.

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Mass.
Also: New York; Chicago; San Francisco; Los Angeles; Seattle; Leeds, England.

PNEUMATIC

PACKAGING AND BOTTLING MACHINERY

Hy-Tra-Lec WEIGHERS "Baby" YOUR PRODUCT



Hy-Tra-Lec weighs and fills your product into any type container with the gentleness of a mother's care. Breakage and crumbling are held to a minimum. Your product reaches the consumer at its attractive, delicious best.

The gentleness is all the more amazing in view of the superior weighing accuracy you get with Hy-Tra-Lec. Unlike conventional weighing machines, Hy-Tra-Lec uses neither spring nor beam scales. The secret rests with an exclusive, patented use of "positive displacement".

Products now handled in hundreds of plants throughout the world include cookies, crackers, potato chips, pretzels, marshmallows, gum and hard candies, and a variety of foods.

Special Service To You

Send us ample supply of product and package. We will conduct trial runs and report to you on the speed and accuracy you may expect with a Hy-Tra-Lec weigher. Models are available for both semi-automatic operation where bags are used or for completely automatic lines where rigid containers are used.

Write Today For Details

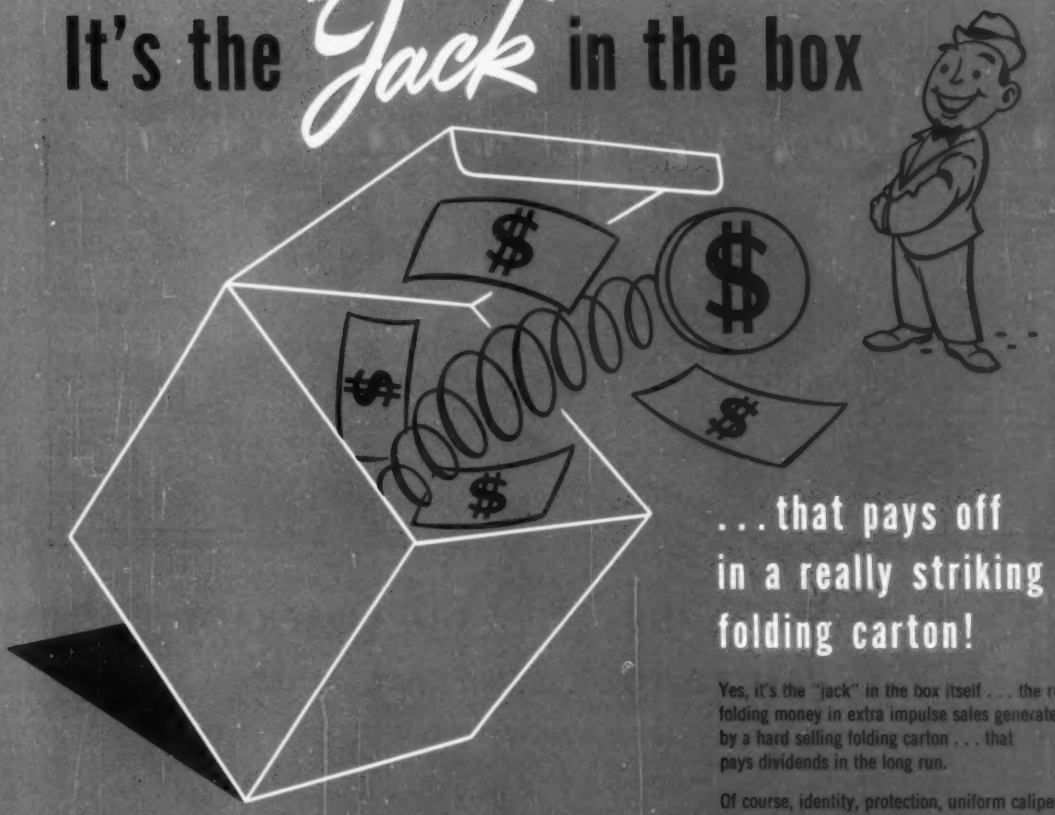
WRIGHT MACHINERY COMPANY

EST. 1893 · 500 CALVIN ST., DURHAM, N. C.
SUBSIDIARY OF THE SPERRY CORPORATION

COMPANY SALES OFFICES: JERSEY CITY · BOSTON · DURHAM
SOUTHWEST REP.: R. P. ANDERSON COMPANY, DALLAS

WEST COAST REP.: KING & ANDERSON, SAN FRANCISCO
EUROPE: SPERRY GYROSCOPE COMPANY, LTD., LONDON

It's the "Jack" in the box



. . . that pays off in a really striking folding carton!

Yes, it's the "jack" in the box itself . . . the real folding money in extra impulse sales generated by a hard selling folding carton . . . that pays dividends in the long run.

Of course, identity, protection, uniform caliper for uniformly brilliant printing, and dimensional stability for smooth flow through high-speed automatic filling machines are all important.

But what the customer sees . . . the quality that matters at the point of sale . . . is the drama, the eye appeal, the selling sense.

United Board & Carton has trained specialists in all phases of folding carton production to consult with you, create for you, or produce the carton you have created for yourself. Just ask a United Board & Carton man to call. No cost. No obligation.

A few of the nationally famous companies who use United Board & Carton services

Swift & Company
Alfred Nichols Bakery
Enterprise Mfg. Co.
U. S. Gypsum
Lily Tulip Cup Corp.
The Kroger Co.
The Coca-Cola Co.
General Motors Corp.
Industrial Tape Corp.
Hickok Manufacturing Co.

UNITED BOARD & CARTON CORPORATION

136 SOLAR ST., SYRACUSE, N. Y.

Carton Plants: SYRACUSE, VICTORY MILLS, COHOES, N. Y., SPRINGFIELD, O.

Board Mills: LOCKPORT, THOMSON, N. Y., URBANA, O.

PRINTING INK ON A PACKAGE CAN BE YOUR BEST SALESMAN

Make your package a "talking" package at the point of sale—use colors that sparkle. There are special inks for printing on cartons, wrappers, boxes, bags, cans, collapsible tubes and sundry other items used in the packaging field. Select the type of printing ink best suited for the job at hand and be assured of satisfactory results.

HYDRY

a moisture-setting ink that prints bright and clean in a full range of brilliant colors. Many food, confectionery, tobacco and drug packaging problems are eliminated by the use of this ink which *dries quickly*. HYDRY is a real time and money saver since waxing, folding or die-cutting operations can be started as soon as sheets come off the press . . . and no storage time is needed for drying.

ROTOGRAVURE INKS

can't be beat for long run multi-color printing of labels, wrappers, bags and folding boxes on a wide variety of paper stock, ranging from manila to pasteboard, cellophane, foil and glassine. You can depend on our ROTOGRAVURE INKS to have the consistency and drying speed required to give dense solids and bring out fine detail.

ANILINK

is a 100% pigmented ink for aniline printing on plain or coated paper, board, cellophane, glassine, acetate, foil and other materials. You will find that ANILINK has the necessary color strength to produce opaque results. It performs well on the press and gives clean, sharp and glossy prints. You can get ANILINK in colors to match your sample—in pastel or brilliant tones.

If your requirements involve special formulations or any inks not listed here, please write us. We are at your service for complete information on ink and color.

GENERAL PRINTING INK COMPANY

DIVISION OF SUN CHEMICAL CORPORATION

10th Street & 44th Avenue, Long Island City 1, N. Y.

Offices in principal cities.

What 50 productive years have meant to the packaging industry

This year, we at American Can Company are observing our 50th anniversary.

Offhand, you wouldn't think our anniversary would be very important except to the 33,000 people who work for Canco. But may we remind you that this anniversary celebrates 50 productive years that have helped your industry grow and prosper?

During this half century, Canco's growth and co-operation with the packaging industry have brought forth widespread process and product improvements—opening *new* markets and helping you sell in *all* markets more efficiently than ever before.

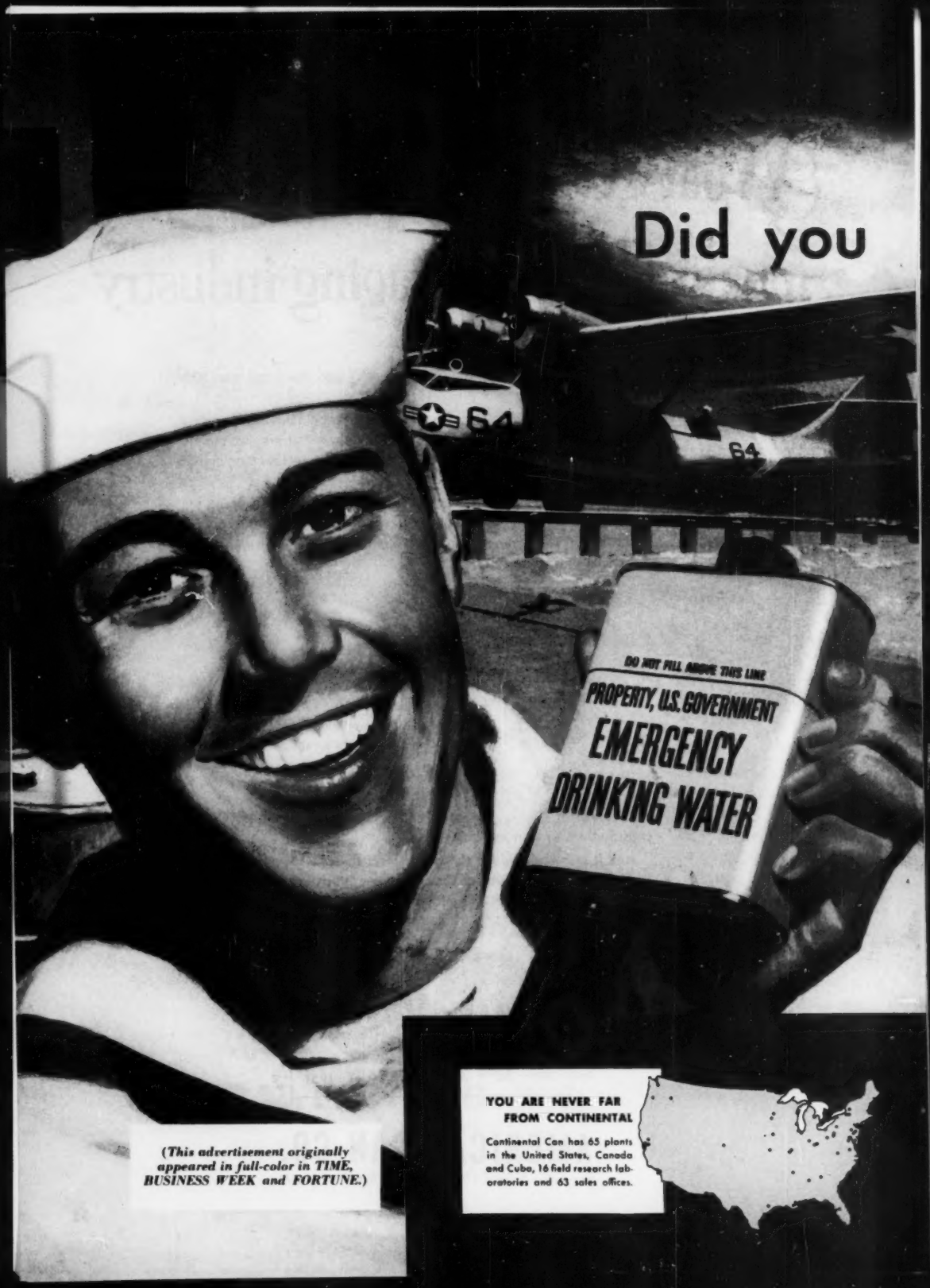
A good case in point is the sanitary can, most famous of all metal containers. This container, perfected by Canco, made large-volume canning of fruits and vegetables possible, revolutionized the grocery business, changed America's eating habits.

The people of Canco are proud of this and the many other Canco contributions to your industry.

And it is our pledge for the years ahead that the inventiveness and ingenuity so characteristic of Canco will continue to explore and open up new areas of usefulness to your industry and to the consumer it serves.

AMERICAN CAN CO.

New York · Chicago · San Francisco · Hamilton, Canada


Did you
DO NOT FILL ABOVE THIS LINE
PROPERTY, U.S. GOVERNMENT
EMERGENCY
DRINKING WATER
(This advertisement originally appeared in full-color in TIME, BUSINESS WEEK and FORTUNE.)
YOU ARE NEVER FAR FROM CONTINENTAL
Continental Can has 65 plants in the United States, Canada and Cuba, 16 field research laboratories and 63 sales offices.

ever see canned water?

CANNED WATER can be a lifesaver if you ever find yourself at sea on a rubber life-raft . . . or are trapped in an isolated battle area dependent on parachuted supplies. But the canning of drinking water turned out to be one of the toughest canning problems ever faced.

What's so hard about canning plain water? Just fill an ordinary canteen, let it stand around for a couple of months, then taste the contents—and you'll know why water is a tough "product" to can.

Water picks up off flavors and has no flavor of its own to hide them. It rapidly rusts containers. It may contain bacteria which may multiply and make it undrinkable. To top it off, water expands when it freezes and this expansion will split an ordinary container wide open.

The first experiments with canned water that we know of were conducted in the Continental Research Laboratories in 1930. But the problem of emergency drinking water was not finally solved until 1941. Then an experimental program was started at Northwestern University Medical School and followed through with intensive research at the Continental Laboratories.

A wax-lined container was developed which is filled with a specially tested, slightly alkaline water. Many millions of these were packed for the Armed Services in World War II. It was intended that these cans of water would be replaced about every six months . . . but many of them stayed in aviation seat packs for two years or more and the water remained drinkable.

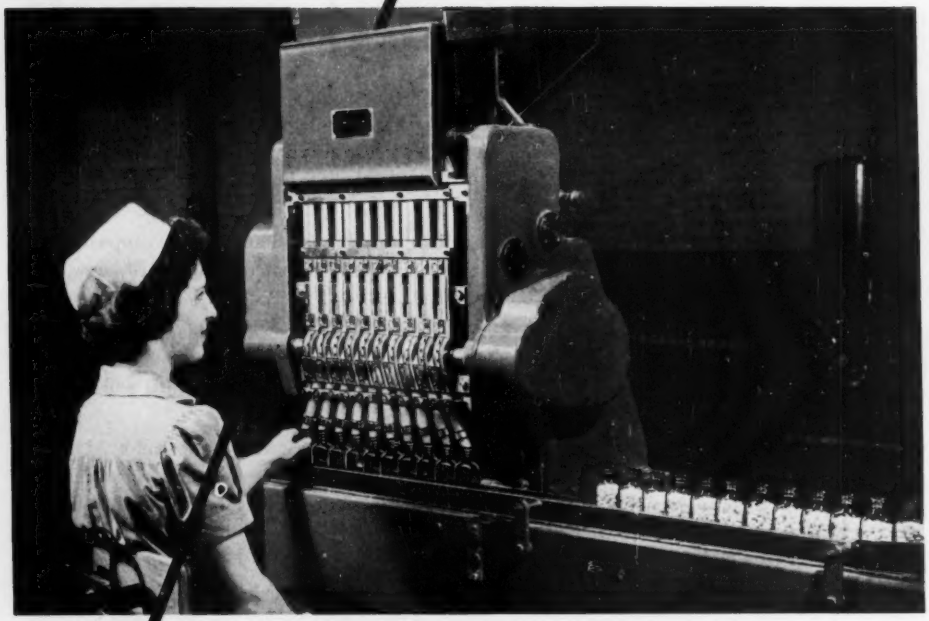
If it's a packaging problem—it's our baby!

The canning of emergency drinking water is just one of the developments in packaging in which Continental has had a hand. Our research people have worked with thousands of separate products. So if you package a product, there's a good chance that Continental can help you do it faster, more economically and more attractively. Let us see what we can do for you.

CONTINENTAL CAN COMPANY

CONTINENTAL CAN BUILDING — 100 E. 42nd ST., NEW YORK 17, N. Y.

The Choice is US



The Arner Company Packages Billions of Tablets with the Fully Automatic Model TBS

Fast, accurate and safe bottling of billions of tablets annually is the complex production problem that the Model TBS successfully solved for the Arner Company. This fully automatic tablet counting and filling machine, developed by **US**, unerringly and rapidly fills not only bottles but also cartons, or cans with any desired count of pills or tablets. Mechanically counting and dropping tablets into the container, the Model TBS is capable of producing up to 150 filled bottles per minute. Its unique design handles tablets with such care that breakage or powdering is almost non-existent. Also because of the simplicity of design the Model TBS may be easily and quickly changed over to suit a wide range of requirements. For full details write **US** today.

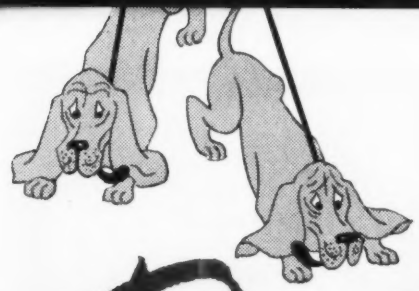
US NET & GROSS WEIGHING ★ PACKAGE FORMING & FILLING ★ CARTON SEALING, LINING, WRAPPING ★ BOX MAKING

AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. ★ CARTONING MACHINERY CORP.

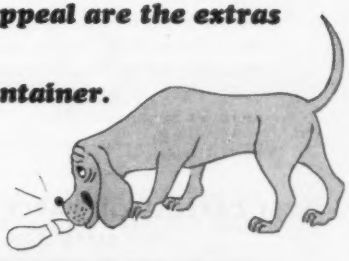
122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York ★ Cleveland ★ Chicago



Private Eye

There's no sleuthing required to find your product in an H-A glass food container. Every package is designed for individual viewing by the consumer. And there's no sleuthing required to recognize the quality and efficiency of an H-A glass jar. Protection and Sales Appeal are the extras built into every H-A container.



HAZEL-ATLAS GLASS COMPANY

WHEELING, WEST VIRGINIA

West Carrollton GENUINE VEGETABLE Parchment

Is Tasteless, Too!

The ideal wrapper for all moist foods is West Carrollton Genuine Vegetable Parchment. It is ODORLESS and GREASE RESISTANT as well as TASTELESS. It is STRONG, too, and *keeps* its strength, wet or dry. You can get it printed in one or more attractive colors (special inks) right to your specifications. Complete facilities in our own plant.

WEST CARROLLTON PARCHMENT COMPANY
WEST CARROLLTON, OHIO

DRY WAXED PARCHMENT
•
BUTTER WRAPPERS
•
BUTTER TUB LINERS & CIRCLES
•
BUTTER BOX LINERS
•
LARD CARTON LINERS
•
MILK & ICE CREAM CAN TOPS
•
SLICED BACON WRAPPERS
•
OLEOMARGARINE WRAPPERS
•
VEGETABLE SHORTENING CARTON LINERS
•
CELERY WRAPPERS
•
FISH FILLET WRAPPERS & INSERTS
•
MEAT WRAPPERS
•
LINERS FOR MEAT TINS
•
POULTRY WRAPPERS
•
CHEESE WRAPPERS
•
TAMALE WRAPPERS
•
MANY OTHERS

Section views of BBD's Research Laboratory showing trained chemists and technicians at work with modern precision instruments. These men are responsible for developing new and better inks... for solving the ink problems of individual customers... for testing the quality of raw materials.

See how BBD teams up with Science to bring you *better* inks for *better* aniline printing

Here a BBD chemist checks the body or rate of flow of a new aniline ink formulation with a Stormer Viscometer (one of three different types of instruments BBD uses for this purpose). The viscosity of fluid ink has an important bearing on its printability — if too thick the ink will not level properly, will pile up on rollers and plates... if too thin it will produce washed-out, pin-holed prints. BBD assures correct viscosity by achieving an ideal balance of pigments, resins and solvents in its inks.

Today's high quality of aniline printing leaves no room for guesswork — particularly in making the inks that are the lifeblood of the process. That is why pacesetting, pioneering BBD joins hands with science in a never-ending *3-way* program of technical research and production control. Under this program BBD constantly develops new and improved inks... solves special ink problems as they arise in the field... and controls the quality of every BBD ink from its initial formulation as a standard to its final packaging in kit or drum. No wonder BBD ANILINE INKS are first choice of aniline printers everywhere!

Delicate analytical balance is used to check the specific gravity of every batch of BBD ink. This is an important control function of BBD's laboratories because specific gravity of an ink determines its ability to deliver good coverage and long mileage. This test procedure also assures the user that every shipment of the same type of BBD ink will contain the same number of pounds per gallon.

If you'd like to know how BBD INKS can do a better job — more economically — for you... write today to **Bensing Bros. & Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.**

Bensing Bros. and Deeney
SALES COMPANY
World's Largest Makers of Aniline Ink
PHILADELPHIA • CHICAGO • WAKEFIELD, MASS.
Pacific Coast: A. M. BOJANOWER, Los Angeles
Export: McLAURIN-JONES CO., New York

Milestones in American family life are often measured in terms of new household possessions which bring greater pleasure or convenience to every member. A movie projector, for example, helps make ties closer over the years as the whole family relives happy times together.

Today the successful operation of every type of mechanical equipment is made easier, surer through the invaluable service rendered by concise, ingeniously illustrated instruction aids.

Whether your product calls for a simple folder, catalog or comprehensive technical manual, you will find Oxford Papers the ideal choice for the most effective presentation either in black-and-white or in color. Find out for yourself how Oxford Papers can help build sales.

OXFORD PAPERS
Help Build Sales

OXFORD PAPER COMPANY
230 Park Avenue, New York 17, N. Y.

OXFORD MIAMI PAPER COMPANY
35 East Wacker Drive, Chicago 1, Ill.

Mills at Rumford, Maine, and West Carrollton, Ohio

ARTIST: RICHARD LINDNER

GREAT IDEAS OF WESTERN MAN

. . . ONE OF A SERIES

Immanuel Kant

Two things fill the mind with ever new and increasing admiration and awe, the oftener and the more steadily we reflect on them: *the starry heavens above and the moral law within.*

Critique of Practical Reason, 1788

CONTAINER CORPORATION OF AMERICA

Protective...Conformable..."Pretty as a Picture"

Nashua's Rayon Velour—

for **argus** Camera Cases

Easy on the Eye with its rich appearance and depth of pile and *Easy to Work* because its creped backing is flexible and readily conformable . . . that's Nashua crepe rayon velour. The velour also fulfills an important protective function for Argus Cameras, Inc. by cushioning the cameras.

Nashua velours are luxury liners for jewelry and silverware cases, backing for picture frames, coverings for gift containers and other display boxes. You can fit this decorative and protective material (which flexes without wrinkling) into *your* packaging picture. You can choose the Nashua velour best suited for your requirement from a wide range of attractive colors.

NASHUA
MAKES PAPER MAKE MONEY FOR YOU

NASHUA GUMMED AND COATED PAPER COMPANY

NASHUA, NEW HAMPSHIRE

BALTIMORE • CHICAGO • DETROIT • LOS ANGELES • NEW YORK • PHILADELPHIA • SAN FRANCISCO • SYRACUSE

VOLUME 24

NUMBER 12

AUGUST 1951

Modern packaging

RESEARCHER goes along with salesman to discuss a method for testing the effectiveness of a counter display in Albert's Pharmacy on Amsterdam Ave., New York City.

PHOTO COURTESY CONSOLIDATED LITHOGRAPHING CORP.

Displays that sell

HERE ARE SIX CASE HISTORIES TO PROVE THAT THE SUCCESSFUL POINT-OF-SALE PIECE IS THE PRODUCT OF RESOURCEFUL PLANNING—NOT LUCK

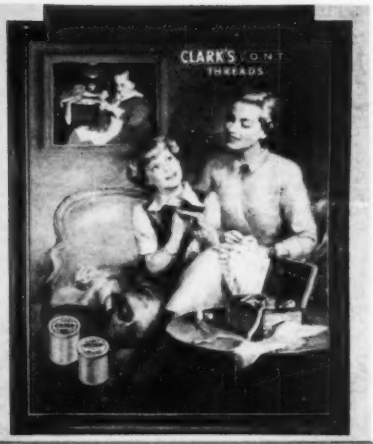
Successful point-of-sale displays today cannot be judged on the basis of eye-catching appearance alone. Their evolution is not a matter of chance or guesswork. Behind every detail of their planning lie reasons so subtle and strategic that they are apparent only upon an understanding of the product's complete merchandising situation.

Competition for store space is so keen that manufacturers have had to develop the most adroit techniques based on long experience, salesmen's observations, research and field tests to assure coveted counter and floor locations.

Better planning has become more general in the last few years due to the increase of self service in all fields of retailing and the accompanying decline in clerk service, which puts a greater burden on package and point-of-sale units to do the selling job. The need for more effective use of the display dollar has also been brought into focus with the realization that the estimated $500,000,000 spent annually on point-of-sale aids amounts to more than is spent for any other single advertising medium with the exception of newspapers.

Much has been learned, for instance, about the width, height, depth and construction of display units to meet the requirements of modern store layouts. Much has been learned about the effectiveness of related display—the grouping together of totally different products to the mutual benefit of both (crackers with cheese, tooth brushes with denti-

PERMANENT FIXTURES for displaying thread and zippers must contain a complete assortment of both colors and styles within a minimum of store space. Nothing irritates a customer more than not being able to match a color or to find a zipper of the right length.



QUALITY APPEAL of a well-known brand is the purpose of Spool Cotton's "Generation after Generation" theme piece, used over and over again as counter centerpiece.

frices, suntan lotions with bathing accessories). Much has been learned about the selection of display materials—some materials actually having been known to repel rather than to attract shoppers in certain outlets under certain conditions. Much has been learned about simplifying the set-up of display units to make them easier for the dealer to use. Clever strategies have been developed in the timing of displays to obtain maximum usage. Much progress has also been made in the use of simplified motion mechanisms and lighting effects.

All of these details differ widely in their application to various products, depending upon how the products are used, where they are sold, in what units they are purchased, how they are priced, how they are distributed, whether they have seasonal interest, geographic preference, appeal for specific income and age groups and a thousand and one other factors. The most experienced men in the business will tell you there is no foolproof formula for all situations.

This being true, the most helpful information for those faced with the planning of point-of-sale material is a knowledge of the behind-the-scenes thinking that has produced successful results.

To bring a little of this thinking to its readers while plans are being made for winter promotions, MODERN PACKAGING has selected for study six companies with successful display programs in progress. Each is presented as an individual case history. The diversity of the products discussed—notions, drugs, toiletries, foods, stationery items, beverages—gives, we believe, a range of applications that will be extremely helpful to hundreds of users in all fields.

CASE A ***How Spool Cotton Co., with a comparatively few types of well-planned counter vendors and counter cards, induces hundreds of thousands of women to purchase millions of spools of J. & P. Coats and Clark's threads, Chadwick's Red Heart yarns and Crown zippers.***

The basic sales strategy behind a spool of thread is the kind of problem of influencing human activity that is the dream of every public relations counsel. Practically every sale must be made in the consumer's mind before she ever gets to the counter to buy. It is being done through one of the most successful educational programs in industry—a program that makes women want to sew, knit and crochet. For years the Spool Cotton Co. has been plugging away at such activity through school and college home economics departments, 4-H clubs, women's clubs, etc., and it has become one of the largest publishers of needlecraft instruction books in the world.

The result of this endeavor is the highest peak of interest in home sewing since the turn of the century. Thousands of women daily are going to stores ready with a list of planned purchases for sewing—yardage, patterns and, of course, thread and zippers.

In such a case, point-of-sale aids do not have to create a demand or, in most cases, an impulse to buy, but they must lead the customer quickly to the right counter to make her planned purchases and they must make sure she buys Spool Cotton products. Thread in display, styled to leading fashion colors, is, of course, a beautiful attraction in itself. The first step in point-of-sale promotion, then, is the planning of counter vendors offering the widest possible selection of colors with the most economical use of space. (There is nothing more irritating to the customer than not being able to match a color.) Next in importance is brand identity, which is

TRANSPARENT PLASTIC units are a quick reminder to shopper of place to buy threads and zippers in locations where other types of displays are unsuitable.

RIGHT THIS WAY to the Crown zipper counter say these easel-back cards for counter or shelf use to direct shoppers quickly to the place where the product is sold. No need to create impulse; the sale has been made in the customer's mind before she gets there by her desire to sew.

CENTERPIECE that depicts a large red satin heart on a paperboard card is a quick director of traffic toward Chadwick's Red Heart yarns.

achieved by strips at the tops of the units, sometimes back-lighted, assuring the customer that she is buying Clark or J. & P. Coats. Sometimes other selling points are included, calling attention to such qualities as color fastness, types of thread, etc. The company has designed the most modern units for this purpose, planned to fit in with modern store layouts and to feature its line of Crown zippers in conjunction with the thread.

In addition to these permanent vendor units, however, there are certain attention-getters to attract the shopper to the thread counter. Spool Cotton Co.'s "Generation after Generation" display card is doing this most successfully. Lithographed in full color, the illustration, showing a mother and daughter sewing, plays up the prestige angle of the Clark and J. & P. Coats names. It is the modern version of the company's "grandmother" illustration, used for so many years, which is now included only as a corner inset in the new display. The card is suitable not only for counters and shelves, but as an appealing central theme for any grouping of sewing accessories.

For directing shoppers quickly to Crown zippers, the company uses two easel-back paperboard displays, both featuring actual packages of the zippers and made sufficiently large and high so that the shopper can see them from a distance and find her way quickly to the right counter without search. Both carry a cross-reference to J. & P. Coats and Clark's and one emphasizes selling points: "wearability, laundering, cleaning, flexibility, color matched."

A small transparent plastic unit featuring "Three Great Names in Sewing"—the Crown, J. & P. Coats and Clark trademarks—is designed as a convenient small permanent unit to perform the same duty of locating the department where the products are carried for types of outlets where the paperboard units are not suitable.

Spool Cotton Co. also feels its reclosable Crown zipper package is a decided advantage in its point-of-sale program. Adopted a year or so ago, this package is believed to be the only one of its kind among major brands permitting customer examination without mutilation of the package—a feature which the company says has cut down returns tremendously.

A display card performing a similar duty of locating the proper counter for the customer features a

big red satin heart that is the trademark for Chadwick's Red Heart yarns —quickly associating the merchandise with a long-favored brand name and providing a simple display piece which can be used in numerous arrangements and tie-ins.

None of these point-of-sale aids is spectacularly novel. All are made to do a direct selling job quickly and economically. That they are performing their duty efficiently Spool Cotton Co. knows by the continued number of requests constantly received for them. They constitute one of the fundamentals of the company's advertising program beyond its educational work. Magazine advertising is used only a few times a year in women's magazines.

CREDITS: *Permanent counter vendor unit, W. L. Stensgaard & Associates, Inc., Chicago. "Generation after Generation" and Chadwick's Red Heart displays, Oberly & Newell Lithograph Corp., New York. Crown zipper displays, Einson-Freeman Co., Inc., Long Island City, N. Y., and Snyder & Black, New York. Transparent plastic display, Dura Plastics, Inc., New York, using polystyrene plastic.*

CASE B

How Calvert used a successful technique to overcome liquor stores' traditional resistance to single-brand displays.

Feature display of a single brand of liquor is becoming increasingly difficult to get. In some states single-brand window displays are forbidden by law. Also, many retailers turn their display problems over to display services which work cooperatively with retailers and distillers to guarantee scheduled display for specified lengths of time.

Many times the problem boils down to the question of how to get dealers to *want* a display. It has been found that when a really helpful idea is provided, dealers will use the display despite scheduled material.

The Calvert circus display is an example of this strategy and also illustrates how the supplier of display materials can be of assistance in developing the successful technique.

Calvert's lithographer is firmly convinced that the responsibility for developing successful displays rests on those firms which are making and selling point-of-sale materials. About six years ago, this firm inaugurated a special services department, called its marketing division, for the purpose of studying merchandising facts pertinent to the point-of-sale assignments currently being executed. This method, it is reported, has resulted in an increasing number of successful merchandising programs built around individually tailored tools.

The Calvert circus display illustrates this thinking. In view of the difficulties of getting special promotions for liquor without special inducements and services, those subjects were isolated which were of wide general interest mentioned most frequently in the local-event discussions that take place in bars and package stores.

One subject that appeared to have practically universal interest during the summer season along practically every Main Street was the annual tour of the circus. Once this basic theme was selected, the matter of developing a display with sales-compelling interest became a simple matter of design and mechanics. The centerpiece shows a clown act with a tremendous illustration of a Calvert Reserve bottle bursting through a paper hoop and a balloon reading, "Hit of the Show," plus a banner reading, "It's Smart to Switch to Calvert Reserve." Side panels illustrating workmen pasting up billboards give a nice sense of anticipation of enjoyment.

The result was that, in hundreds of instances, the circus display was given preference over other scheduled material at that time because it coincided with the future or present appearance of the circus in town—proving once again the need for well-thought-out strategy to obtain successful results.

CREDIT: *Display, Consolidated Lithographing Corp., Brooklyn, N. Y.*

CAREFUL TIMING and popularity of subject matter made dealers want to put up this circus display when the circus was coming to town—in many cases despite plans for using other previously scheduled material.

CASE C

How the Anahist Co. determined the effectiveness of a simple new battery-operated motion display on a counter merchandiser.

The development of simplified, economical mechanisms is making possible a much wider use of motion displays. One of these devices consists of a small motor operated by an ordinary flashlight battery. With suitable lithographed mountings it can be adapted for use with many different types of products—a pretty girl applying hand lotion, a child brushing his teeth, a dog scratching fleas, or whatever activity may be applicable to the product promoted. Such units have almost universal opportunity of being used in good locations because they require no current and no electrical connection to the nearest outlet.

Toward the end of the winter cold season this year, the Anahist Co. adopted such a display, showing a young woman bobbing her head into a handkerchief. The front of the self-service unit held an assortment of 30 packages of Anahist tablets—bottles of 15, 40 and 100 tablets—and packaged atomizers. The entire unit occupied only 8 by 9 in. of counter space.

This motion display was placed in 22 test locations, including both large metropolitan and neighborhood stores. During a six-week period from March into April—actually the tail-end of the cold season—it was reported that sales of Anahist in the test stores increased from 50% to 100% while the display was being used.

This, of course, was not surprising. Every display man knows the value of motion in attracting shoppers. What the Anahist Co. wanted to find out, however, was the reaction to this particular type of mechanism. Would the dealer on his own initiative replace the battery after the two- or three-week period when the original one wore out? Indications were that in general he would not—even when a spare battery was taped inside the display to make it easy. The company concluded, therefore, that frequent follow up is required to keep the display in action.

In spite of this difficulty, however, and despite the fact that the motion unit costs about four times as much as a former step-of-stairs display without motion, Anahist is ready to go into full-scale distribution of the display at the beginning of the fall cold season. Postcard replies indicate almost 100% requests for it from dealers.

Another indication of its popularity was the fact that when the supply of Anahist, which the company claims accounts for 60% of the antihistamine market, got low, dealers still kept the display up, filling it with other cold remedies. Naturally, no merchandiser likes this situation even though it continues to help his sales to a degree, but it is a condition that often occurs when a counter merchandiser is successful and it points out the necessity of regular follow-up to see that the right brand is stocked.

Anahist, of course, will make further tests over 10-day periods after the displays are placed in the fall, but all indications are that the advantages of motion far outweigh the disadvantages when properly serviced.

CREDIT: *Anahist motion display, Einson-Freeman Co., Inc., Long Island City, N. Y.*

FLOOR STANDS and box toppers help Mead Johnson put over story of its square packages and pour spout in grocery stores.

GIANT SET-UP of combination Pablum boxes, 16 by 24 by 6 in. replicas of actual packages, provided opportunity to acquaint mothers with fact that new cartons contained original product.

BATTERY-OPERATED motion displays provide economical units with strong pulling power. Anahist experienced increases in sales from 50 to 100% in test stores where this girl bobbed her head into handkerchief.

CASE D

How Mead Johnson & Co. uses point-of-sale aids in grocery stores to get across the story of its new square, pouring-spout package for Pablum and to maintain its enviable position amidst lower-priced competition.

About the first solid food a baby gets is a spoonful of precooked cereal mixed with his milk. For years the only leading product on the market specifically developed for this purpose was Mead Johnson's Pablum, recommended widely by physicians and sold in cylindrical fibre containers mostly through drug stores.

During the last few years, however, competitors have been making headway with similar products sold through grocery stores at a lower price in rectangular cartons.

Mead Johnson & Co. was thus challenged to maintain its leadership amidst this rising competition and in February, 1950, launched a broad program to introduce Pablum cereal products more generally as a grocery-store item. The problem was simplified by the wide acceptance of Pablum through medical approval, but an effective point-of-sale program was necessary to inform mothers that Pablum cereal products were now available in the grocery store.

The first step in the program was

the adoption of a rectangular-shaped folding carton, designed by a top-notch designer, to give maximum display value and quick identity to a package that had to take its place among the more boldly designed packages on grocery shelves. To assure mothers that the product was the same, a small illustration of the old cylindrical package was reproduced on the face of the carton with arrows and copy calling attention to this fact. A pouring spout was also incorporated as a new convenience.

The next problem, of course, was the planning of proper point-of-sale pieces to help the dealer tell the new story and call attention to the new package with its convenient pouring spout.

With the aid of its lithographic supplier and its advertising agency, the company made a study of the types of displays most acceptable to modern food stores, using all available data such as those collected by grocery trade publications and through other independent sources. The result was the selection of a group of overwire banners, shelf strips, window displays, floor stands and giant dummy packages in line with what such research had determined to be the most effective and acceptable in the stores. The various pieces were dummied up, photostated and sent to brokers to determine what quantities were required. Production of the various pieces was based on these requests, thus reducing waste of unused display material to a minimum.

The net result was a promotion which Mead Johnson & Co. considers an outstanding success. Pablum, with almost 50% of the entire baby-cereal market, is not only holding the enviable position it has built up over the years through its educational work with the medical profession, but over a recent six-month period has actually increased sales about 10%. And due to the higher price Pablum commands over competitors, dealers are enjoying a larger profit per sale.

CREDITS: *Display pieces, Forbes Lithograph Mfg. Co., Boston, Mass. Package design, Raymond Loewy & Associates, New York.*

COOPERATIVE DISPLAYS of related products are gaining favor with the idea that what helps one is mutually beneficial to the other. Canada Dry teams up this summer with Quaker Oats, suggesting ginger ale as a pleasant beverage with oatmeal cookies—in line with its program of extending sale of ginger ale beyond that of a mixer for alcoholic drinks.

CONSTANT CHECK-UP by advance salesmen is one secret of Canada Dry's successful point-of-sale promotions. Usually its program includes eight major promotions a year, salesmen actually placing pieces in stores, including at least one or more units, similar to the flavor drink pieces below—centerpiece, counter card, poster and bottle topper.

CASE E ***How Canada Dry makes sure that the hundreds of thousands of display pieces it produces each year are put up and stay up.***

In no other field is point-of-sale promotion more necessary to produce impulse sales than in the beverage business. Canada Dry, which spends about 25% of its total advertising budget on point-of-sale pieces, has one of the most efficient systems to assure the use of this material.

The program comprises about eight major promotions a year, strongly tied in with magazine advertising, which dealers like because it provides continuity and quick association in the shopper's mind. The pieces for such promotions usually include those which experience has proved to be the most acceptable: (1) a centerpiece which is the king pin for windows and mass floor displays; (2) a counter card for use with or without merchandise; (3) an unmounted poster for wall or window use; (4) a stand sleeve for use on permanent wire floor stands; (5) a bottle topper —a die-cut card which can be perched on top of a bottle anywhere in a store.

As soon as these are dummied up,

photostats are made of the pieces and sent to the sales managers of the bottling plants. Each manager orders the quantities he estimates can be used, based on the number of outlets covered. When the pieces are ready, they are given to Canada Dry's advance salesmen, who take them around, put them up in the stores and check them, usually once or twice a week, to see that they stay up.

Canada Dry has an advantage in this respect, the company believes, in that it does not depend on what are known in the trade as "driver salesmen," who carry the merchandise on a truck and sell as they go around. Canada Dry's advance salesmen only take orders and a big part of their contact work is to see that displays are put up and to police them periodically.

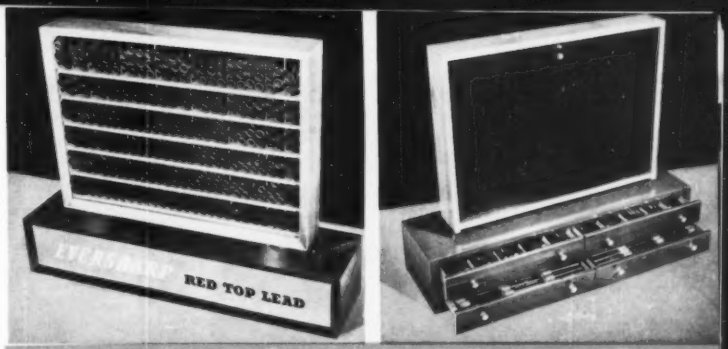
Through this procedure, Canada Dry displays stay up on the average of four to six weeks, with little waste, as the advance salesman is given a certain quantity and it is his job to see that they go up. Usually he doesn't take all of the pieces available on the first trip—maybe just two or three. On the next trip he may add another, or he may provide additional bottle toppers, bin flanges or some other type of piece that will suit the dealer's requirements better as a tie-in with related merchandise, a mass display or whatever is producing the best results.

In addition to the standard pieces, the company provides a wide variety of other types of point-of-sale aids. In fact, it uses something like 100 to 150 different types of pieces covering almost every conceivable kind of display material, such as decals, shelf strips, back-bar units and permanent wall units. Not all of these are included in the regular promotions, but they are available if needed to cover every possible spot where display can be used effectively.

An idea of how this extensive and closely policed system of distribution pays off is indicated by the results of Canada Dry's Mary Hartline promotion last February, tying in with the company's TV program. February is usually the slowest month in the beverage business—yet with an activity during that month promoting ginger-ale splits in six-bottle carriers as a beverage (in contrast to ginger ale as a mixer)—a field in which Canada Dry believes there is greatest opportunity for expansion—the company increased the sale of ginger-ale splits from 40 to 50% over a four-week period and actually showed more sales of this product during these four weeks than during any other previous four-week period in the company's history.

Currently, in keeping with its promotion of ginger ale as a beverage Canada Dry is running a cooperative point-of-sale campaign with the Quaker Oats Co., suggesting that cookies made from Quaker and Mother's Oats be served with Canada Dry Ginger Ale. The display pieces—counter card, posters, stand sleeve and bottle topper—depict packages of both products with appetizing illustrations of the cookies and refreshing glasses of ginger ale.

CREDITS: *Display pieces for Canada Dry-Quaker Oats promotion, U. S. Printing & Lithograph Co., Cincinnati, Ohio. Canada Dry flavor display, John M. Haass Litho Co., New York.*



COMPLETE LEAD DEPARTMENT—five gross of pencil-lead packages—in 18 by 23 by 6 in. of space keeps 68 different types of lead on the counter with no more need for drawer digging, no out-of-stock condition and no extra bulk.

EASY SELECTION of eight styles of pen points in Eversharp Co.'s compact plywood unit with transparent blister made unit universally accepted by dealers.

THE BELL RINGS each time a package of blades is removed from Eversharp Co.'s pilferproof unit for Shick Injector razor blades.

CASE F *How the Eversharp Co. gets a complete department of 68 different types of pencil-lead packages on today's crowded counters . . . puts over its story of personalized pen points and maintains impulse-purchase interest in Eversharp Schick Injector razor blades.*

The Eversharp Co. tailors every display to the requirements of a specific product. Pencil leads, for instance, are a strong impulse item on the counter where shoppers can see them and be reminded of their requirements.

To be effective, however, any display of leads must contain a complete selection and must be constructed so that the dealer has no drawer digging to do to find the kind of leads the

(*This article continued on page 169*)

Mechanized squeeze-bottling

CIBA'S IMPROVED 'NEBULIZER' DEMONSTRATES THE USE OF NEW MACHINERY TO SPEED THE ASSEMBLY OF POLYETHYLENE SPRAY CONTAINERS

Interesting new features of package design and construction have produced substantial functional improvements in the polyethylene squeeze tube that Ciba Pharmaceutical Products, Inc., Summit, N. J., introduced two years ago as the nasal spray package for its Pyribenzamine anti-histaminic solution.* Distribution of the new pocket package—now redesigned as a small streamlined, oval bottle with a distinctive molded shoulder section—was started last month.

Current users of the Ciba anti-histaminic nasal spray are finding that the improved "nebulizer" package, as it is called, contains a larger amount of the solution, has a more comfortably fitting nasal applicator tip, is easier to squeeze and gives a better, more uniform spray when squeezed.

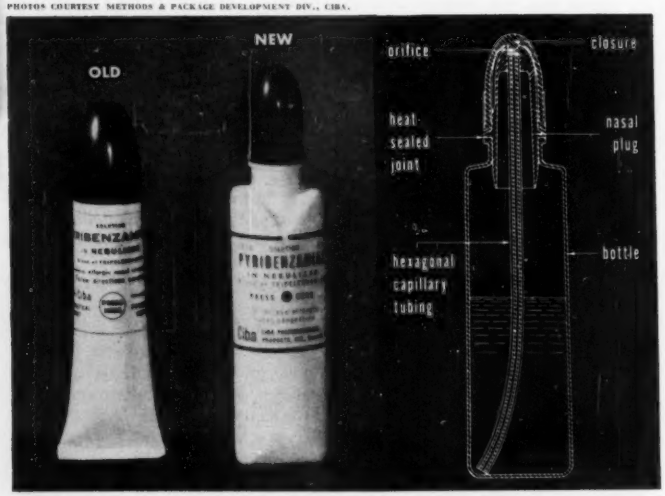
* See "Squeeze-Tube for Nasal Spray," MODERN PACKAGING, May, 1949, p. 97.

All component parts of the improved package with the exception of the label—the bottle, the capillary tube and spray nozzle which is actually the mixing chamber, and the closure—are made of polyethylene.

Of widespread interest is the fact that assembly of the new Ciba package uses newly developed semi-automatic machinery for fitting the capillary tube in the nozzle—previously a tedious hand operation—and, furthermore, marks the first use of new equipment for heat sealing the nozzle to the neck of the bottle. It is expected that this machinery will be available to other squeeze-bottle users who might be interested in its application to their packaging operations.

Ciba's decision to change from the original tube-style, injection-molded container to a blown bottle is the result of a number of interrelated factors.

PHOTOS COURTESY METHODS & PACKAGE DEVELOPMENT DIV., CIBA.



CHANGE from injection-molded to new blow-molded container gives better spray function and permits use of new assembly and sealing machinery. Cross-section of new design shows leakproof closure details and capillary tubing with finned surface to distribute air in the mixing chamber. This convenient pocket package measures less than 4½ in. tall.

From the sales standpoint there was the desirability of all the improvements mentioned above for the user's convenience, plus the merchandising advantages accruing from a more distinctive package.

From the production standpoint, it was believed that using a blown bottle would make possible economies in the package assembly. The new package has been in production only a few months, but already Ciba officials report that current operations indicate these beliefs are justified. The original tube package had to be heat sealed at the bottom before it was filled; the bottle eliminates this operation and its companion trimming operation. The injection-molded tube also had to be checked by hand during the labeling operation to determine the front and back because one side wall, being slightly thinner than the other, required special location of the label; such precautions are unnecessary with the blown bottle with its uniform wall thickness, thereby increasing labeling efficiency and speed.

Most important, the proposed new machinery for semi-automatic assembly of parts of the package couldn't be used with the older design.

Under the supervision of L. H. Zahn, manager of Ciba's Methods and Package Development Division—whose background in the development of the original spray tube and its later modifications gave valuable knowledge upon which to draw—the design and construction details of the spray, closure and bottle were worked out in cooperation with the technical staff of the squeeze-bottle supplier. Its shape and dimensions were settled only after a number of different models were tested for squeezing ease and spray quality. Actually, an experimental single-cavity mold was produced for all parts before the final production mold was produced. It was felt that this single-cavity mold was one of the most important steps in working out

the design and eliminating functional "bugs" of the squeeze bottle.

The white, private-mold, polyethylene bottle, 3½ in. long, has a flattened oval shape with a rounded bottom and a short neck. To give it distinction, the bottle is molded at the front and back in what amounts to a "plunging neckline." The design and proportions of the bottle, combined with the wall thickness (0.034 in.), provide just the degree of flexibility needed to make squeezing with a thumb and forefinger easy—yet more than enough strength to withstand the effects of the estimated 400 to 500 squeezes the bottle will receive before its ½-oz. contents are consumed.

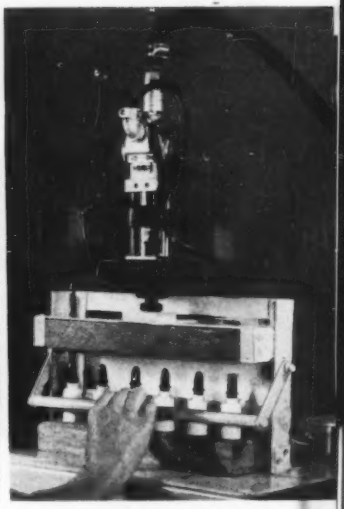
Whereas in the old package the spray nozzle was an integral part of the tube, with the new bottle the nasal plug is a separate piece inserted in the neck—as is the usual practice with blow-molded, squeeze-spray bottles. This has eliminated a number of problems inherent to the construction of the previous nozzle.

It will be recalled that in assembling the original package, a separate stainless steel tip was used, into which was fitted the capillary tube; this assembly, in turn, was then fitted into the aperture at the top of the nozzle—a delicate, tedious hand operation. Because such close tolerances then had to be held in the dimensions of the capillary tube, tip and nozzle opening to insure the proper spray, there were a high number of rejects, both of parts and assembled packages. Later the steel tip was replaced with one made of nylon; still later the outside of the capillary tube was changed from its round shape to a hexagonal shape.

Success of the hexagonal tube shape provided an idea for the mixing chamber in the nozzle in the new design.

By the use of an ingenious capillary tube which is star shaped in cross-section—the star "points" around the outside diameter being actually tiny, flexible fins—it was possible to design the interior wall formation of the nasal plug so that the spray mixing chamber is molded as an integral part. The orifice channel, smoothly molded to a 0.026-in. diameter, leads directly into an opening where the air and liquid solution are mixed and into which the capillary tube is inserted. The use of a tip piece is thus eliminated completely and, when the tube is inserted, its small fins bend and flex in the opening to give a secure fit over a reasonable variation. The fins also distribute the air in several separate streams to give better mixing with the liquid in the mixing chamber and contribute to the especially fine quality of the spray.

TUBE-INSERTING machine measures, cuts and inserts lengths of tubing in plugs at the rate of 20-30 per minute. Assembled plug here is ready to be ejected while the operator positions a second plug in the machine.



ASSEMBLED PLUGS are positioned in filled bottles; device pushes them part way in neck, leaving flange and neck exposed for heat sealing.

The nasal plug or nozzle has three vertical grooves which are molded on the outside and serve as a pressure release.

A new friction-fit closure, molded of the same green-colored polyethylene as the nozzle, covers it completely. Deep knurling on the skirt of the dome-shaped closure offers a good gripping surface for the fingers when the closure is pulled off. Inside, a centering and two seal-off rings, plus a small sealing plug which is located at the very top, make the closure leakproof.

These friction seals, it is said, stop leakage even though the cap may be pushed down incompletely and hold it in place even though the package is stepped on with the whole weight of a man.

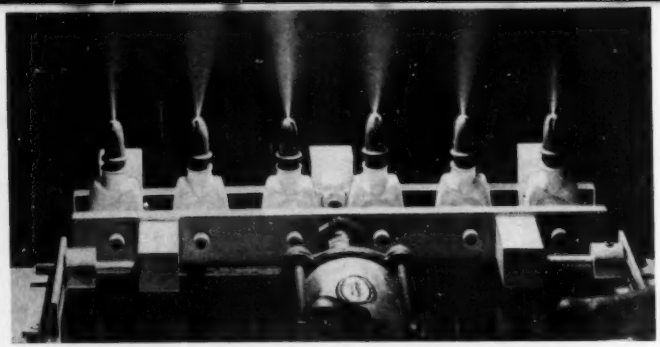
The same type of label is used on the new package as on the original—a wrap-around, varnished band of transparent, pressure-sensitive tape, printed in maroon and green. A "press here" dot is printed in maroon on the front and center of the wrap-around label.

Package assembly

In the ampoule section of Ciba's Pharmaceutical Manufacturing Division, where the new package is filled and assembled, the first production model of the new, semi-automatic, capillary-tube-inserting machine is assembling 20 to 30 spray plugs per minute even with inexperienced operators.

This machine is, as mentioned above, a semi-automatic device designed to measure, cut and insert a piece of polyethylene tubing from a continuous reel of stock into a plug to form a completed spray unit for the squeeze bottle.

To operate it, the plastic spray plug (nozzle) is placed by hand in a holder located beneath a movable, vertical shaft. This shaft, counterbalanced by a weight on a lever arm, is lowered and raised by a handle. A single operator is required, who receives the spray plugs in bulk and places them, one at a time in the holder. On each insertion of a plug, the lever is lowered and raised, and by means of a series of limit switches and solenoids, the capillary tubing is



SPRAY IS TESTED prior to sealing so that any errors can be corrected.

fed and cut automatically and the assembled units are then ejected automatically into a container which is placed nearby.

As soon as the plug is placed in the holder, the operator pulls the handle down as far as it will go. This action causes this succession of operations: (1) plastic tubing from the continuous reel is cut to the proper length—approximately 4¾ in. in the case of the Ciba nebulizer—in the measuring and cut-off device, (2) a stop lever swings to one side from its position directly above the cavity of the measuring and cut-off device and (3) the cut and measured tube is sent home in the plug.

The assembled plug and tube are raised out of the cavity when the handle is returned to the initial loading position. After the cut tube has cleared the cavity, the stop lever moves back into position. Immediately when the handle reaches the initial loading position, a solenoid device ejects the assembled spray unit from the machine into the aforementioned container. Simultaneously, another solenoid, linked to the tension pulley, is energized, thus feeding more tubing against the stop lever which de-energizes the solenoid, loading the measuring and cut-off device and, at the same time, discontinuing the tubing feed. The machine cycle is then ready to be repeated.

One gain resulting from this mechanized assembly operation is the maintenance of precision air gap relationships in the mixing chamber. This assures uniformity of spray characteristics that cannot be accomplished easily by hand assembly methods.

At Ciba, this tube-inserting machine is operated as an independent unit most of the time, so that assembled plugs are made up ahead of time for use on the filling line as they are needed; finished plugs are stored in large polyethylene bags until used.

Thus, the actual packaging line begins with the filling operation, which is done by hand, the girls using small syringe-type ampoule fillers to measure the ½-oz. of solution into the bottles, held in small work racks, six bottles per rack. After the bottles are filled, the racks are passed to the next girl in line who inserts the assembled nasal plug part of the way into the bottle neck. To aid this operation, two fixtures have been designed and developed by Ciba's Methods Division engineer, J. R. Miller. The first of these is used to insert the spray-plug assemblies (six at a time) to a predetermined distance from the bottle neck flange, providing the proper spacing needed in the heat-sealing unit. The six bottles, still retained in their rack, then enter the second fixture where all six are simultaneously tested for proper spray action.

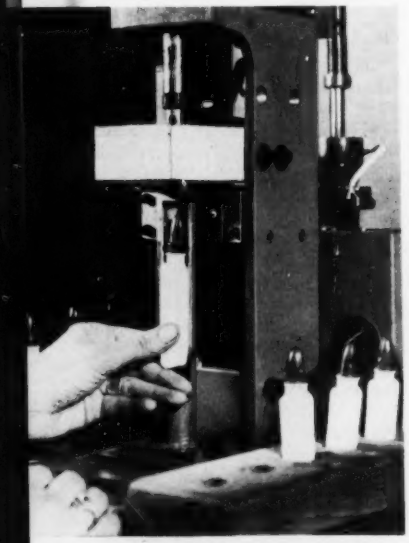
An alert, perceptive inspector at this point detects and replaces any spray-plug assemblies which show evidence of poor spray characteristics. The reason for spray testing before sealing is a good one, since faulty sprays at this point may be remedied, thus reducing to a minimum the number of final line-assembly rejects.

Since there is a slight possibility of leakage occurring between the plug and the bottle neck, it was decided as an added precaution—as well as to make the package tamperproof—to heat seal these two parts together. This sealing operation is now done mechanically, using the prototype model of a semi-automatic machine specially designed for the purpose.

Each plugged bottle is removed from the work rack after the spray inspection with the spray assembly prepositioned in the neck and placed vertically in a guide in the heat-sealing machine by the operator who also raises it to the sealing position, pressing the bottle shoulders against a positioning plate located just below the heater unit. In this position the exposed insertion section of the plug is exactly in the center of the core of the heater unit, which contains an air duct a full 360 deg. in circumference.

At this point the operator trips a foot lever which sets in operation the mechanisms controlling the heating and sealing cycles. Holding jaws located in the bottom of the heater grip the bottle neck while a blast of hot air is directed against the entire periphery of the spray plug directly under the flange. An automatic timer controls the duration of this blast (approximately 0.5 sec.) which is necessary to bring the affected area of the plug to the softening or semi-fluid stage. Immediately upon the cessation of the air blast, pressure is applied to the top surface of the plug flange, forcing it into place in the neck of the bottle and seating the plug flange squarely onto the bottle

(This article continued on page 178)



HEAT-SEALING machine with bottle in guide tube ready to be raised to sealing position. Plug will be rammed home during sealing, which is accomplished by a controlled hot-air blast. Sealed bottles are in holder at right.

Snow Crop goes horizontal

UNABLE TO CHANGE TRADE PRACTICE IN FROZEN-FOOD DISPLAY, THIS PACKER CHANGES LABEL TO CONFORM

That a package's surface-design placement determines its display position should be axiomatic. It seems logical that a package should always be displayed so that the brand name on the main display panel reads straight across. But unfortunately trade practice does not always conform to the logic of design—and trade practice is very hard to change.

As a result of this finding, Snow Crop Marketers Division of Clinton Foods, Inc., New York, is changing over the label design of its frozen fruit and vegetable cartons from a vertical position to a horizontal one. This alteration is the first major change in the packages since 1948, when Snow Crop adopted the pictorial-type label design. At that time it was decided to use the vertical display panel in the belief that it would be a distinguishing feature.

Recent store surveys, however, revealed that a large majority of retailers were stocking Snow Crop's packages horizontally in the refrigerated cases despite the fact that the labels were designed to be read the other way. They did this simply because most frozen-food labels are horizontal and they are in the habit of displaying them that way. This handicapped brand recognition for Snow Crop and put the packages at a definite disadvantage since it increased the "headway" of case traffic. Shoppers slowed down to check the label and their reaction was that the packages were "troublesome."

The alteration, though admittedly expensive, is believed justified by its assurance of proper display.

The change-over started with the spring, 1950, asparagus pack and will be completed with this year's fruit and vegetable packs. It is estimated by company officials that the cost will run well beyond $100,000.

In restyling the waxed paper labels, most of which are printed in five colors by rotogravure or letterpress, improvements have been made in the product illustrations. Color reproduction of the vignettes has been improved to present the product in its true-to-life fresh state or at its mouth-watering best as a cooked dish. The effectiveness of these vignettes has been enhanced by shifting the famous red spot containing the product name and weight printed in reverse—a holdover from the original package design—to the top part of the display panel. This also gives additional white space for price stamping.

Brighter blue background strengthens the contrast between it and the brand name, printed in green ink, and the red spot. The switch to a horizontal position has also made it possible to extend the solid blue background color from the display panel over the top panel, which adds to the visual depth of the package. The product name is printed in reverse on all sides of the package to permit ready identification whatever way the package is stacked.

The company has taken advantage of the restyling program to add an illustration of its whimsical little bear trademark, "Teddy Snow Crop," which is now featured in its television commercials and newspaper advertisements and to revise the cooking instructions on the back panel.

CREDITS: *Waxed-paper overwraps, Marathon Corp., Menasha, Wis., and Western Waxed Paper Co., Div. Crown Zellerbach Corp., San Leandro, Calif. Cartons, Marathon Corp.*

TO STRAIGHTEN UP the display of its brand name in frozen-food cases, Snow Crop changed the design to make the name read the long way of the package—the way dealers were used to stacking packages. Increased white space permitted addition of "Teddy Snow Crop" to display panel.

Igloo for ice cream

A FACTORY PACKAGE THAT PRESERVES REFRIGERATION FROM THE SELF-SERVICE CASE TO THE HOME FREEZER

Consumer-packaged ice cream is something of a problem product. In order to meet the requirements of modern self-service merchandising, the package must incorporate a sales-stimulating design and clearly identify the product as to flavor and origin. But—and this is where improvement has been badly needed—the package should also serve to guard the product against melting until the consumer can get it home and into the refrigerator.

In recent years, various types of insulated bags have been successfully utilized to provide an extra measure of temperature protection for ice-cream packages. However, it has been widely recognized by ice-cream manufacturers and retailers that use of such bags created several problems. For example, if the bags were distributed at the check-out counter, the product might be partially melted before it was placed in the bag, particularly if the waiting line were long or the ice cream had been carried around in the store while other items were purchased.

On the other hand, when bags were left available right at the ice-cream cabinet, there arose the opportunity for an occasional dishonest shopper to conceal other purchases beneath the ice-cream carton. This frequently necessitated opening and inspection of the bags at the check-out counter—a practice resented by many patrons.

An insulated package with "built-in" protection features was the obvious answer, although in the past such cartons have been considered prohibitively expensive. This summer, as an outgrowth of pioneering efforts by a Florida producer, insulated ice-cream cartons have made their initial appearance in Chicago and several other metropolitan centers. Stemming from preliminary development work by V. D. Patterson, a leader in the refrigeration field before he entered the ice-cream industry, the self-insulated ice-cream car-

FINISHED PACKAGES in Jewel Tea Co.'s Yummy line, with colorful waxed-paper overwraps, lack nothing in eye appeal. Note copy on its insulation. Stripe colors are keyed to the flavors.

ton appears to be a logical and needed improvement over conventional packages. Under investigation by a number of important producers, it promises to attract investigation by the industry.

Inception in Florida

The earliest commercial user of this type of package is reported to have been Plantation Foods, Inc., which makes Velda brand ice cream in an ultra-modern plant at Uleta, Fla. In 1950 this company began using a package which incorporated a die-cut sheet of B-flute corrugated paper beneath the outer wrapper. The corrugated material was cut to a T-shape to provide overlapping ends and sides which would fully enclose the inner carton.

Velda ice cream is sold through self-service stores in Florida, using open-top, low-temperature cabinets designed to produce high sales volume and hold distribution costs down. Experience by Plantation Foods demonstrated that with the corrugated thermal protection between inner carton and outer waxed wrapper, housewives could successfully buy Velda ice cream along with other food purchases and get it home in good condition, even if an hour or more elapsed between the time the product was removed from the storage cabinet and placed in the home refrigerator.

Officials of the Bowman Dairy Co., Chicago, became interested in the Velda package and made arrangements for further development work. Bowman markets its own line of ice cream and also handles some private-brand business. As a result of this program, the first ice cream to reach the Chicago market this year in an insulated package was the Yummy brand, produced by Carroll Ice Cream Co., a Bowman subsidiary, for Jewel Food Stores.

In half-page color ads devoted to its new "Igloo" package, Jewel Tea Co. declared: "No more soft, melted ice cream. Now—take home Yummy ice cream cold and firm. The new Igloo carton keeps Yummy firm from your Jewel ice-cream case to your home refrigerator. Packed in its individual 'Igloo,' Yummy ice cream keeps firm 60 minutes."

The Yummy pint packages include five flavors—chocolate, vanilla, strawberry, Neapolitan and a "special"—banana.

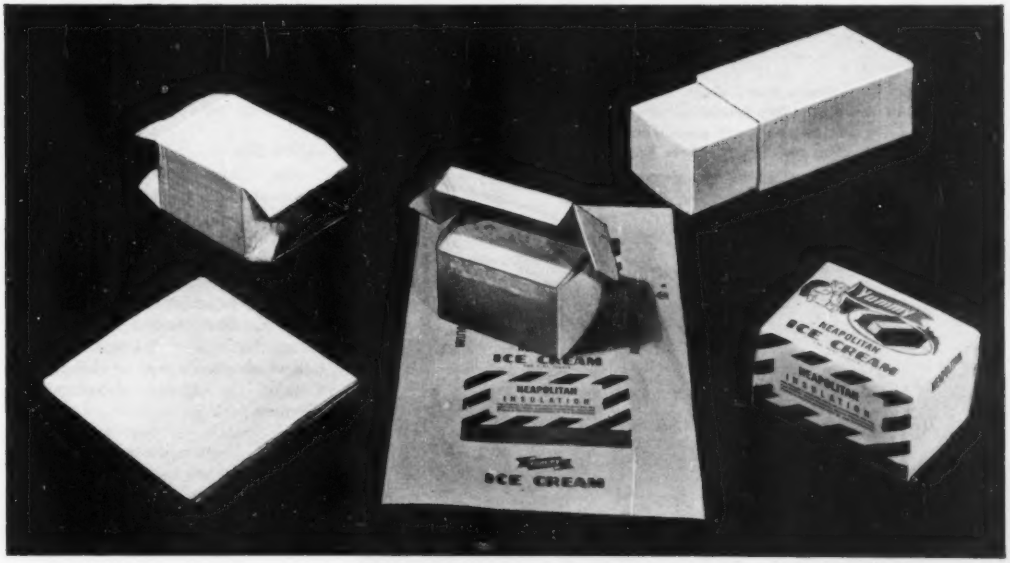
Outer wrappers of the Jewel Yummy packages have a related design featuring a photograph of a dish of the product used in conjunction with a line drawing of Yummy, the Jewel polar bear trade character. Side panels carry diagonal stripes, along with the name of the flavor. Light blue is used on all the packages for most of the printed label information, the banner held by Yummy and a solid band extending along the bottom of the package on two sides. The stripes are in different colors for easier flavor recognition—tan for butter pecan, orange for vanilla, dark brown for chocolate, red for strawberry and alternating red and brown for Neapolitan.

On the front panel of the package, just beneath the flavor name, appears the word "Insulation" in large capital letters, followed by this statement: "This package is insulated for your convenience. Remove insulation when storing in freezing compartment of your refrigerator."

Package structure

Structurally, Jewel's Igloo package, as well as the new Bowman insulated cartons, embraces three components

COMPONENTS of package: standard linerless carton, corrugated sleeve and waxed-paper overwrap. Specially scored corrugated sleeve that sets up from the flat and folds in at ends for complete insulation is only unconventional feature.



—an unprinted, standard-type pint linerless paper carton, an insulating corrugated sleeve of patented construction and a printed waxed-paper overwrap. Only the flavor designation appears on the inner carton. The waxed-paper overwrapper has the special coating, originally developed for frozen-food packages, with a sparkling, eye-catching gloss which enhances the printing and specially formulated for quick, positive heat sealing on the wrapping equipment.

From the standpoint of thermal protection, the corrugated sleeve is the heart of the package. In its preliminary distribution of the Igloo container, Jewel employed a die-cut piece of corrugated material for this purpose, but has now standardized upon a corrugated sleeve, which affords a much better insulation and is so fabricated as to expedite packaging operations.

Of special B-flute corrugated with an outside surface of bleached sulphite, the sleeve is somewhat similar to those used in packaging light bulbs. However, each end of the sleeve is lightly scored so that the sides fold inward in bellows fashion when pressure is exerted from the side, covering the ends of the inner carton and completing the insulated enclosure. The seam of the sleeve is formed by overlapping the outer surface sheet about ⅛ in. beyond the joined edges.

Similar in construction to the Jewel packages, those adopted by Bowman Dairy Co. for its own line of ice cream feature the Bowman name and the company's trade character, Bud Bowman, on the top panel, along with the flavor name. Side panels of the wrapper have a comic-style city-country scene with two friendly cows rubbing noses. The background color of the Bowman wrappers is light yellow or cream, with contrasting colors on the printing for easy flavor identification.

Production

Operations at Bowman's ice-cream plant in Chicago illustrate how the insulated packages are handled on the production line.

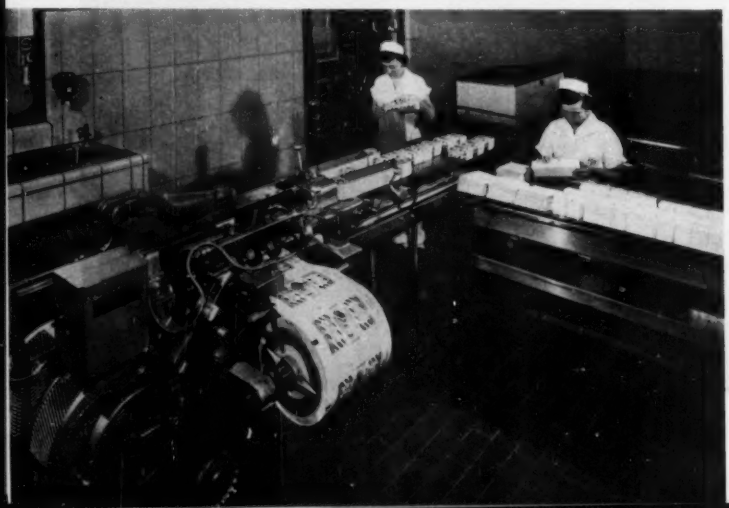
The lock-end linerless inner cartons, which have a glue-sealed front flap to facilitate opening by the consumer, are filled and closed automatically on conventional equipment, then placed in trays for quick freezing at low temperature.

Next the pint packages are transferred to another plant area where the sleeve and overwrap are applied. Packages are slid into the sleeves manually, then the ends are folded inward and the package placed upon the intake conveyor of the automatic wrapping machine. The sides of the conveyor are adjusted to hold the sleeve ends firmly against the sides of the package while the wrap is being applied. The carton-wrapping machine, of a standard type widely used in wrapping a variety of products, feeds the printed wrappers from a continuous roll and is equipped with an electric-eye mechanism which insures accurate cut-off and wrapper registration. As the package is elevated for wrapping, the paper is held tightly around the insulated sleeve by means of a hold-down device which stays with the package until all folds are completed, producing a tight, uniform wrap. Finally, the package is automatically moved forward through the heaters, where the wrapper is sealed, and advanced onto the discharge conveyor. Cartons are then placed in counts of eight in kraft bags and returned to the hardening room until ready for shipment.

The Bowman engineering department is working on a completely automatic production line which is expected to be in operation as soon as volume warrants. It is also reported that equipment being built for another ice-cream manufacturer as a combination unit will first apply the insulating paper to the inner carton, then pass it automatically to the second wrapping machine, where the waxed overwrap with registered design will be applied to the package. Two such units will be installed by this company—one to handle Diced cream and the other the regular pint packages. The completely automatic units will include an accumulator for feeding four Diced cream packages onto the conveyor of the first wrapping machine.

Working in close cooperation with Bowman and the supplier of the inner carton and overwrap, the company which makes the insulating corrugated sleeve has conducted extensive research in order to perfect a sleeve affording maximum insulation consistent with economy.

PRODUCTION at Bowman Dairy plant. Trays of cartoned ice cream arrive from the freezer at right; insulating sleeve is manually applied and ends folded in before packages are placed on in-feed conveyor of overwrapping machine. The finished packages are bagged in units of eight.



Sales results

Early sales results indicate that consumers like the idea of the insulated carton. Those customers who have formed the habit of squeezing ice-cream packages prior to purchase, to locate one which is frozen hardest, may have to adjust themselves to the somewhat "soft" feel of the insulated carton. But this is an educational detail which should not be difficult in view of the obvious advantages of the new package.

CREDITS: *Linerless inner cartons and printed waxed-paper overwrap, Marathon Corp., Menasha, Wis. Insulating sleeve, Hankins Container Co., Cleveland, Ohio. Automatic wrapping machine, Hayssen Mfg. Co., Sheboygan, Wis.*

HANG-IN-SHOWER shampoo squeeze bottle sports [illegible] handy plastic strap to loop over shower head or tap and an ingenious ring-and-pin closure that can't be lost

Utility extras

MAX FACTOR'S NEW 'SIGNATURE' LINE DEMONSTRATES CAREFUL PLANNING FOR PLUS FEATURES IN POLYETHYLENE SQUEEZE BOTTLES

Utility and convenience features incorporated in the handsome packages designed for the "Signature" line of grooming preparations for men by Max Factor of Hollywood are excellent examples of the little "extras" that do so much to stimulate sales.

Realizing that most men shampoo their hair while they take their showers, Max Factor's designer, Walter Crane, decided to offer the shampoo in a functional container that could be kept right in the shower, ready for immediate use. The green-tinted polyethylene squeeze bottle with its lettering and decorative design molded in was an obvious choice, since the non-breakable feature has already popularized the use of such bottles as liquid-shampoo containers. But the addition of two other convenience features makes the package noteworthy.

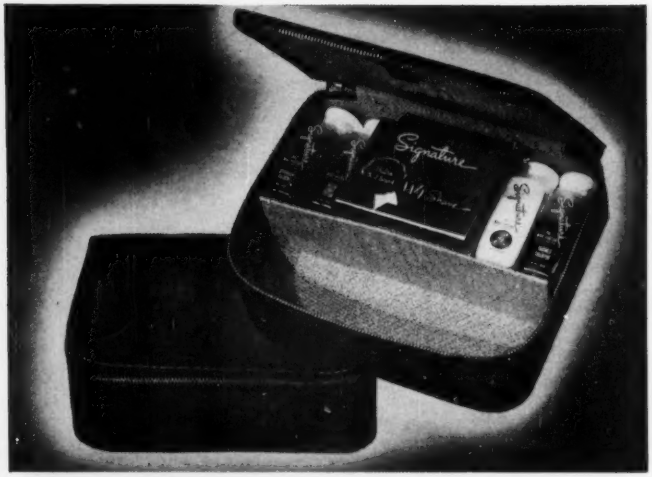
The first is the handy thong looped through part of the closure which permits the bottle to be hung on the shower head or tap handle. It, too, is polyethylene—¼-in. wide lengths cut from extruded, lay-flat tubing.

The second is the ingenious closure which eliminates the problem of a separate cap which could be dropped or mislaid in the shower and keeps the shampoo from spilling or becoming diluted if the bottle is left open. The closure is similar in principle to the one which was introduced last year on Max Factor's prize-winning World of Beauty global hand-lotion container.*

The closure unit consists of an injection-molded transparent polystyrene closure ring that pivots in holes in the neck of the bottle. In the bottle neck is a plug containing a spring and a pin machined to very close tolerance. Utilizing the flexibility of the polyethylene to spring-load the rigid closure ring, the ring is merely flipped to one side with the thumb in opening. As it is snapped off-center it releases the pressure on the pin and the pin pops up, allowing the shampoo to flow as the inverted bottle is squeezed. By returning the seal to its vertical position the pin is depressed and a pressure-tight seal is made.

Like the glass bottles used for the other liquid preparations in the line —a cream hair dressing, after-shave lotion and a deodorant cologne—the plastic bottle is shaped for ease in

*See "A Whole World Molded of Polyethylene," MODERN PACKAGING, April, 1950, p. 142.



TRAVEL KIT—vinyl inside and out—is intended for permanent use. Flat polyethylene squeeze bottles are turned on edge for space economy within the zippered kit and are, therefore, labeled on the narrow side.

handling. The "masculine" shape of the bottle, whose wide shoulders and reverse-tapered sides suggest a male torso, was functionally designed to fit the grasp of a hand. It fits the hand when upright as well as when tipped upside down for pouring, since, in profile, the bottle is narrow at the top and extra wide at the base. This design also gives the bottle unusual stability.

In the five-piece travel kit these preparations are packaged in refillable, 4-oz. natural polyethylene bottles whose shape departs from the usual wide-shoulder, reverse-taper design. Here again the practical considerations inspired the use and shape of these new polyethylene plastic bottles.

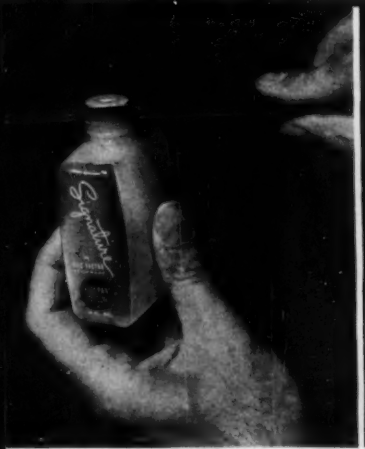
The kit is not just a gift package; it is designed for repeated use. For that reason the non-breakable plastic bottles are constructed so that refilling them is an easy process when the special siphoning device, which is provided in the kit, is used. This consists of a length of extruded tubing with a polyethylene plug attached to one end.

To refill the bottles, the user first removes the neck plug in the polyethylene bottle (using the side of a nail file to loosen it), inserts the plug attached to the tubing in the squeeze-bottle's neck and the tube itself in the standard-size glass refill bottle and, by continued squeezing of the plastic bottle, draws in the desired amount of liquid.

So far as is known, this simple device is the first practical provision for refilling of squeeze bottles, which are so often wastefully thrown away after a single use.

The slim, rectangular-shaped bottles nest in the kit narrow side up to save space; hence the labeling—two-color decals produced especially for application on polyethylene—is placed on the narrow side rather than the front. The bottles are capped with the same white, compression-molded closures that are used on the glass bottles. The travel

Refilling the squeeze bottle made easy



PLUG IS PRIED OUT easily with the edge of fingernail file.

REFILL PLUG and the tube may then be inserted into the glass refill bottle.

SQUEEZING the polyethylene bottle pumps in a new supply of the product.

kit itself is made of brown leather-grained vinyl and lined with beige, twill-like vinyl. In addition to the refillable squeeze-bottle packages, it also contains a standard-sized package of Lazy Shave—a new compressed talc—and an extra compartment that may be used for holding a razor, tooth brush, etc.

The Lazy Shave package may be cited as typical of the whole line's packaging-design theme. It consists of a paperboard slide tray and sleeve with an insert tray that holds the talc cake and a mitt-like applicator. The sleeve and insert tray are covered with copper-colored aluminum foil with the lettering and decorative seal being printed in contrasting white and dark brown.

The copper-colored foil is the identity feature of the entire line. The care with which these new packages were planned is indicated by the fact that a satin-finish foil was specified rather than glossy, with the thought that if foil later becomes unobtainable a paper with a copper-colored pyroxylin finish can be substituted with a minimum of change in appearance.

Unit cartons for the wide-shouldered, tapered bottles and part of the packages for combination sets are also made of the copper-foil-covered stock. The unit cartons are particularly interesting because they follow so closely the design of the bottles, the width of the base being approximately two-thirds the width of the top. When they are displayed on a shelf, the space left between the bottom sides attracts immediate attention and helps set these packages apart from the conventional straight-sided cartons.

To emphasize the eye appeal of the packages at the point of sale, an unusual display case, made of formed Masonite on a molded ash sawdust base, has been designed with a large transparent polystyrene bubble front.† This 33-oz. casting—said to be the largest single injection molding ever made on the West Coast—has a vertical supporting fin which holds two horizontal shelves as an integral part.

The functional aspect was again a consideration in designing the case. Repeating the shape of the bottle, the case occupies a small amount of actual counter space, being only 11 in. wide across the base, 14 in. wide across the shoulders and only 19 in. in height.

Viewed as a whole there is nothing gadgety about the new packages, but there is showmanship and flair in the imaginative way the functional prerequisites have been treated to give a glamourous appearance befitting the products "used by Hollywood's most famous men."

LAZY SHAVE is a new product idea—a beard-hiding pancake-type talcum for use between shaves.

GLASS BOTTLES for certain products are identical in shape and closure with the shower shampoo squeeze bottle. Note the unusual shape of the copper-foil carton; it is designed to give distinction on the shelf.

CREDITS: **Shower Shampoo package**—*Polyethylene bottle, Plax Corp., Hartford, Conn.; polyethylene plugs, Owens-Illinois Glass Co., Toledo, Ohio; polystyrene closure ring, Eldon Mfg. Co., Los Angeles, Calif; polyethylene thong, extrusion by Visking Corp., Chicago, cut by Barrett Eindery Co., Chicago; screw-machine pins, Solt Automatic Co., Van Nuys, Calif.* **Travel kit package**—*Kit, A'Cadia Cosmetic Kit Co., New York; polyethylene bottles and plug on refill tubing, Plax Corp.; tubing, Calmar Co., Los Angeles; closures, Victor Industries Corp., Brooklyn, N. Y.; decals, The Meyercord Co., Chicago.* **Lazy Shave package**—*Complete boxes, W. C. Ritchie Co., Chicago; wraps rotogravure printed by John R. Scherer Co., Inc., Chicago.* **Unit cartons** *and* **combination packages**, *Robert Gair Co., Inc., New York; glass bottles, Owens-Illinois Glass Co.; closures, Victor Industries Corp.; foil labels, Pacific Label Co., Los Angeles.*

†See Display Gallery, MODERN PACKAGING, July, 1951, p. 96.

Packaging's Hall of Fame

THIRTY-SECOND OF A SERIES

Coca-Cola

STYLES CHANGE, but the 1910 pretty-girl appeal of Coca-Cola advertising goes successfully on.

Few would dispute the claim that Coca-Cola is the world's best known commercial product, nor that its distinctively shaped bottle is the world's best known package. The statistics are overwhelming.

Since Coca-Cola was first bottled in 1894, some 200 billion bottles have been packaged in the United States alone—each bottle, since 1918, a replica of that gracefully curved and fluted shape that "fits the hand so well a blind man can tell what he holds"; a package that Raymond Loewy (who had nothing whatever to do with its design) has called "the most perfectly designed package in use today."

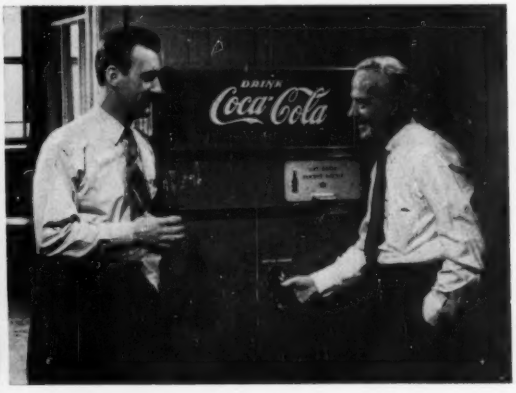
Additional billions of bottles have been and are being consumed in foreign lands in every corner of the world. The bright red-and-yellow truck bearing the invitation to "Drink Coca-Cola," serving some 400 foreign bottlers and 3,000 foreign retailers in 70 countries, is as familiar in Iceland and Timbuctoo as it is in Main St., U.S.A. Only behind the Iron Curtain —where it might serve, as elsewhere, as a symbol of the abundant American way of life—is the Coca-Cola bottle unknown.

Coca-Cola is by all odds the world's biggest glass package. Approximately 2 billion Coca-Cola bottles are currently in use throughout the world. Each bottle, so admirably combining structural strength with distinctive beauty of line, has an average life of from two to five years and averages 26 fillings per year—yet in this country alone replacement needs annually are around 700 million bottles (23,000 carloads, at 220 gross per car), keeping six glass plants busy.

The number of Coca-Cola bottles filled in *one day*, if standing upright, side by side, in a straight line, would

YESTERDAY . . . and TODAY

IN 1900 merchandising of bottled Coca-Cola followed the leisurely horse-drawn pace typical of that era.



IN 1951, through refrigerated automatic bottle vendors, Coca-Cola almost literally became "Always within arm's reach."

NOMINATED FOR PACKAGING'S HALL OF FAME BECAUSE:

- Its bottle, a classic of design, is the world's best known and biggest selling glass package.
- Its story demonstrates the power of a package to safeguard quality and reputation while extending markets to the earth's far corners.
- Its merchandising skill is responsible for such mass-marketing 10-strikes as the carry-home carton and the automatic vendor.
- Its leadership in bottling and quality-control methods has aided the entire beverage industry.

extend a distance of approximately 1,000 miles. Three days' fillings would extend clear across the country, from New York to San Francisco. The annual total now is in excess of 12 billion.

The average bottler's truckload is 180 cases of 24 bottles each, and approximately 8,000 truckloads are delivered by 1,100 bottlers to nearly 2,000,000 retail outlets in the United States every working day of the year.

This indicates an annual U. S. total of 34,500,000 bottles, which means that every man, woman and child in this country drinks a bottle of Coke on an average of once every three days—not to mention the volume of soda-fountain sales.

This is close to half the more than $1-billion total U. S. market for all carbonated soft drinks, and although competition in the cola field has at times been intense, no single competitor has ever approached more than one-quarter the Coca-Cola volume.

From its very earliest days, The Coca-Cola Co. has recognized the value of trademark and product quality, and strict regulation of these elements is one of the few direct controls that it maintains over its hundreds of independent, franchised bottlers.

Despite the unique, decentralized nature of its business, with no guarantee that its recommendations would be accepted by its independent bottlers, the company has not hesitated to pour millions of dollars into the development of high-speed bottling and quality-control equipment—water purifiers, bottle washers, filling and capping and inspection equipment—that have set the standard not only for Coca-Cola bottlers, who have universally accepted them, but for the entire beverage industry. Every Coca-Cola bottling plant is an immaculate, mechanized showplace, to which visitors are welcomed.

FAMOUS BOTTLE AND CROWN constitute the world's biggest glass package. To date, more than 200 billion bottles of Coca-Cola have been sold.

Although it sells nothing to consumers (its sole business is the supply of base syrup to jobbers and bottlers), The Coca-Cola Co. in 65 years has expended $240 million on consumer advertising—probably the largest sum spent to advertise a single product in commercial history.

Further demonstrating its awareness of the merchandising support that even the best package must have, The Coca-Cola Co. has originated such basic instruments of soft-drink merchandising as the refrigerated vending cabinet (ranging from the first ice-water cooler to today's nickel-in-the-slot automatons) and the multiple-sale carry-home carton.

It was a May day in 1886 when a struggling pharmacist with a bent for invention, a Confederate veteran named John S. Pemberton, cooked up the first batch of Coca-Cola syrup in a three-legged iron pot over a wood fire in the back yard of an ante-bellum red brick house located in Atlanta, Ga.

The beginnings

He had achieved the blend of flavors that he had long been seeking for a new soft drink, but he had no name for it.

Learning that some of the ingredients included extracts from coca leaves and cola nuts, his friend and bookkeeper, F. M. Robinson, wrote out the words in a flowing script: "Coca-Cola." That was the origin of the priceless trademark that has been

Evolution of the world's best-known bottle

BEGINNING with the old Hutchinson wired-cork bottle illustrated at the left, Coca-Cola bottlers shifted quickly to the straight-sided modern bottles after the crown cap was perfected around 1900. Long search for a distinctive package was culminated in the Samuelson design patented in the year 1915. Extra-bulbous shape shown in the patent illustration —inspired by the appearance of the cola nut—was modified before actual use to essentially the same shape used today.

preserved to this day essentially unchanged.

Dr. Pemberton lugged a jug of the syrup over to Willis Venable, who operated one of the rare soda fountains of those days (in the summer months only) in Dr. Joseph Jacobs' drug store at historic Five Points, in the center of Atlanta. The first point-of-sale display for Coca-Cola was a small oilcloth sign bearing the now-famous script that Pemberton tacked to the awning of the store. Mr. Venable agreed to give the new drink a whirl, but his patrons were generally indifferent.

Pemberton's health was frail and his capital meager. But he painted more signs and hung some of them in the Atlanta horse cars. His faith in the power of advertising was unusual for his day. In the first year he had sold 25 gallons of syrup for $50—and spent $46 of this on advertising. He managed to introduce the drink to a few more drug stores, but by the time he died in 1888 he had sold control of his invention and the business, formula and trademark had changed hands several times. On one of these occasions, a one-horse wagon rattling down Atlanta's Marietta St. carried all the property of the infant company.

One of the patrons of the Five Points fountain who had tried the drink and liked it was one Asa G. Candler, a young wholesale druggist with an establishment on Peachtree St. Before his death, Dr. Pemberton had sold a one-third interest to Mr. Candler, and his heirs now closed out the business for a total return of $1,750.

Mr. Candler shared Dr. Pemberton's faith in the product and he had what Pemberton lacked: youth, health and capital. By 1891 Mr. Candler had become sole owner of the Coca-Cola formula, trademark and equipment, to which he turned his entire attention. He formed The Coca-Cola Co. as a Georgia corporation, registered the trademark in 1893, laid out extensive advertising and by 1895 could proudly say to the few other stockholders who by that time had joined him that "Coca-Cola is now being sold in every state now comprising the Union."

But the future of Coca-Cola—as had been true of the automobile and other great American inventions—was bigger than any one man could imagine. In 1919 Asa Candler sold his en-

PHOTO COURTESY OWENS-ILLINOIS GLASS CO.

AT GLASS PLANT begins the rigid control that follows every Coca-Cola bottle throughout its life. Here a technician check-weighs freshly molded bottles.

AT BOTTLING PLANT, each franchised bottler follows rigid rules to detect and eliminate worn bottles. This is a typical discard.

tire Coca-Cola holdings for what seemed the staggering price of $25 million. He could not know that within his lifetime (he died in 1929) the company would net that much profit within a single year.

Start of a package

Although Mr. Candler certainly built the foundation of the modern merchandising system, it must be recorded that he did not recognize the place of packaging in the future of Coca-Cola until others demonstrated it to him. Curiously, too, the bottlers who first scored a resounding success with Coca-Cola were not the originators of the idea.

Coca-Cola bottling started in the most casual way, in the summer of 1894.

Young Joseph August Biedenharn, 28 at the time, operated a candy company in Vicksburg, Miss., and supplied Coca-Cola syrup to soda fountains in the town. He was also bottling soda water—lemon, strawberry and sarsaparilla—which was popular with the country trade. Noting that the country folk were increasingly asking for a glass of Coca-Cola when they visited the town's few soda fountains on hot summer days, the thought struck him: why not pre-mix the Coca-Cola syrup and carbonated water in bottles, just like sarsaparilla, and thus extend the market beyond the soda fountains—right into the country?

"I just went to work and bottled Coca-Cola," Mr. Biedenharn reminisced during the 50th anniversary of this event, in 1944. "I did not say anything to Mr. Candler about it, but I did ship to him the first two-dozen cases of Coca-Cola I bottled. Mr. Candler immediately wrote back that it was fine. . . .

"You know," Mr. Biedenharn mused in 1944, "to this day he has never returned my bottles!"

These first of 200 billion Coca-Cola bottles, Mr. Biedenharn recalls, were the old 6-oz. Hutchinson cork-stoppered bottles, with the wire hook that held the cork in place protruding from the neck when the stopper was pulled up. The necks of these bottles were short and they were packed upside-down in a wooden case with the necks extending through holes bored in a false bottom; there were no partitions.

This was the style of bottle shown at the left, dated 1900, in the historical group on p. 80—a sample from a Valdosta, Ga., bottler which is the oldest now in The Coca-Cola Co.'s archives.

Mr. Biedenharn—still hale and hearty at 84 today—doesn't recall the labeling of his first bottles, but thinks they were plain bottles with just his name on them, similar to the Valdosta bottle. There must have been a paper label to identify the contents. Then, as now, the bottles were returnable and required a deposit.

The crown cap and the bottle finish to accommodate it were then being perfected and within a few years Mr. Biedenharn had changed over to it. When Mr. Candler wrote him, around the turn of the century, to ask whether he had heard of the new crown-cork seals, Mr. Biedenharn proudly sent him a case of the new package to prove that he was already using them. By this time the trademark "Coca-Cola" appeared on the crown and was blown into the bottle.

Mr. Biedenharn was joined, gradually, by his six younger brothers and the business prospered. Mr. Candler had given them the bottling franchise in perpetuity for the entire state of Mississippi and eventually they purchased additional territories in the states of Texas, Arkansas and Louisiana. The Biedenharns—the clan now includes more than 100 descendants of the seven brothers—operate nine Coca-Cola bottling plants today and have made a fortune from the packaging idea of 57 years ago—but they missed the really gigantic opportunity for national development that was seized by another pioneer in Chattanooga, Tenn.

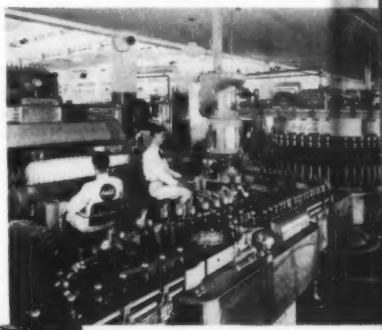
The Chattanooga vision

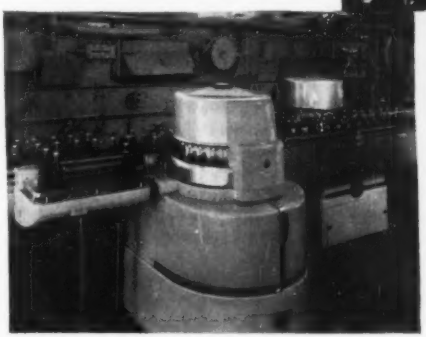
History doesn't record whether Benjamin F. Thomas was aware, in

Showplace plants

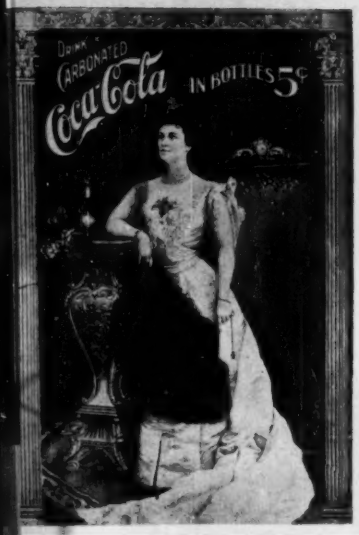
TYPICAL of modern design of Coca-Cola bottling plants is this Houston plant, opened in 1950.

BOTTLING ROOM at the new Houston plant shows how ample provision is made for visitors.





MACHINERY perfected by years of engineering by The Coca-Cola Co. and its suppliers is close to automaton. Here, in Atlanta plant, clean bottles emerge at left rear (above) from soaker bath and pass inspection light to filling and capping machine, then to machine that inverts each bottle to mix syrup and water, and, finally (left photo), to X-ray inspection machine.



1904

1951

POSTER-STYLE DISPLAY has always told the story of Coca-Cola with but few words—putting across the idea that it is enjoyed by nice, attractive people. Lillian Nortica, Metropolitan opera star, posed for 1904 lithograph; today, trend is to active sports with pretty-girl appeal.

1899, of Joe Biedenharn's small success down in Vicksburg or whether he developed his idea spontaneously. But Thomas, a young Chattanooga attorney, had seen service in Cuba during the Spanish-American War in 1898 and had noted that a bottled soft drink of local origin was being widely sold throughout the island. He coupled that idea with his own liking for Coca-Cola—which he had, up to then, had only at fountains—and conceived the notion that in bottles Coca-Cola could achieve really universal distribution and popularity.

Thomas shared his thoughts with his friend and fellow attorney, Joseph B. Whitehead, also of Chattanooga. The more they talked about it, the bigger the prospect grew. They decided to go to Atlanta and put it up to Mr. Candler.

Candler, still exceedingly busy with his soda-fountain syrup trade, told the Chattanoogans he was not interested in going into the bottling business himself, but that if they cared to erect plants at their own expense and take all the risks incident thereto, he would be glad to enter into a contract with them for the use of his syrup, the product name and trademark.

Apparently Mr. Candler wasn't staggered when the ambitious young attorneys asked for the entire United States as their franchised territory for bottling. He stipulated only the exceptions of the state of Mississippi, which he had already promised to Joe Biedenharn, and New England, where a wholesaler had a long-term contract for the exclusive sale of Coca-Cola in that section. All the rest he ceded to Thomas and Whitehead, in perpetuity. The contract was signed on July 21, 1899.

This was surely one of the most fabulous contracts in American commercial history. Without paying a cent, Thomas and Whitehead—with no experience whatever in bottling and practically no capital behind them—obtained rights that turned out to be worth hundreds of millions of dollars. The equivalent of a single share in these original rights today pays dividends of $3,000 a year—but neither the man who introduced the Chattanoogans to Candler nor Candler himself was sufficiently impressed at the time to get a share for himself, although it could have been had for a song.

Off-hand, this would appear to be a case of remarkable foresight and faith in packaging on the one hand against total lack of faith on the other. But the Chattanoogans had nothing whatever at stake—and the decision that Mr. Candler made, consciously or not, proved to be eminently correct in its establishment of company policy.

The contract established for all time that The Coca-Cola Co. would remain pretty much aloof from the bottling business and make its money from the sale of syrup—profiting only as the bottlers profited.

Could Mr. Candler have foreseen that a gigantic Coca-Cola Co., if it controlled both ends of the business, might one day be a prime target for Government trust-busters? At any rate, when that most vigorous trust-buster of them all, Thurman Arnold, several years ago investigated The Coca-Cola Co. he not only gave the company a clean bill, but ended up paying public tribute to its policies and practices as setting a shining, non-monopolistic example for others.

Merchandising pattern

The pattern of packaged distribution of Coca-Cola developed rapidly after Thomas and Whitehead returned to Chattanooga with their contract in their pocket.

A bottling plant was established in Chattanooga in the fall of 1899; another was opened in Atlanta the following spring—the first introduction of the bottled drink to citizens of the home town of The Coca-Cola Co. itself. The two partners agreed to split their vast territory, roughly between North and South. Thomas remained in Chattanooga and undertook the development of the Middle Atlantic, Northeastern, Great Lakes and Pacific Coast territories, while Whitehead elected to establish his headquarters in Atlanta and take jurisdiction over the Southeastern and Southwestern areas.

It was apparent to both men that it would be a physical and financial impossibility for them personally to establish and operate plants sufficient to serve their enormous territory. They soon began a diligent search for competent individuals in all parts of the country who could be interested in setting up local plants under sub-franchise. Thus began the in-

stitution of the locally owned and operated Coca-Cola bottling plant—an institution which is today as much a part of the American home-town scene as a post office or fire house.

Both Thomas and Whitehead lived barely long enough to see this pattern established. Joseph Whitehead died in 1906 and Benjamin Thomas in 1914. John T. Lupton, another Chattanoogan who put money into their early efforts, lived until 1933.

The evolution of the Thomas-Whitehead-Lupton interests in today's pattern for Coca-Cola distribution is too complex to follow here. Every local Coca-Cola bottler today gets his franchise and buys his syrup from one of six "parent bottlers." Five of these parents are currently owned by The Coca-Cola Co.—but the sixth and largest is The Coca-Cola Bottling Co. (Thomas), Inc., which still holds most of the territory originally organized by Ben Thomas, now including New York City and State.

The Coca-Cola Co. owns but 42 of the present 1,108 local bottling plants. This small sample serves mainly as a laboratory for the company's ingenious maintenance of packaging and product quality standards.

Gross business of The Coca-Cola Co. itself is today about $128 million a year. The biggest share of the nickel goes to the local bottlers; their combined sales are several times that of the parent company. The wholesalers, or parent bottlers, are limited to a profit of 9 to 12% on each gallon of Coca-Cola syrup.

The famous bottle

Try, if you can, to imagine the success of Coca-Cola without the distinctively shaped bottle which since 1916 has been its No. 2 trademark. There is no other package you can think of that could be instantly identified by 90% of the world's population by its shape alone.

Would Coca-Cola have reached anything like its present dominance if it had continued to be sold in the straight-sided, paper-labeled bottle which prevailed up to 1916? To packaging people, the question needs no answer.

Thomas and Whitehead were remarkable for their time not only in their vision of the function of a package in extending markets "farther than a horse can travel," but in their feeling that the package itself should be a trademark.

By the early 1900s the spectacular success of Coca-Cola had brought forth a horde of imitators. This worried Ben Thomas.

The late George Hunter, until his death in 1905, head of the Thomas company, recalls that his Uncle Ben frequently told him, "George, we need a Coca-Cola bottle which a person will recognize as a Coca-Cola bottle even if he feels it in the dark. The Coca-Cola bottle should be so shaped that, even if broken, a person could tell at a glance what it was."

But difficulties attendant upon the development of semi-automatic processes for bottle blowing for some years forbade special designs and it was not until 1913 that Ben Thomas' quest was really pushed. All Coca-Cola bottle suppliers then were urged to submit new designs, from which one would be chosen.

Chapman J. Root, whose Root Glass Co. in Terre Haute, Ind., was a leading supplier, called together his supervisory staff and outlined the need. He placed the project in the hands of a task force headed by Alex Samuelson, Swedish superintendent of the glass plant and a machine designer of note, and T. Clyde Edwards, a cost accountant.

The requirements were that the new bottle be (1) distinctive and (2) practical to handle in all the equipment then being used by Coca-Cola bottlers.

"Get all the information you can on the coca leaf and the cola nut," Samuelson suggested to Edwards. It had occurred to him that maybe a design could be worked out that would be associated with one or the other of these two name-inspiring ingredients of Coca-Cola.

Edwards went to the Terre Haute Public Library. There, in the *Encyclopedia Britannica*, it is said, he found a line drawing of the cola nut—a bulbous pod with longitudinal ridges. A machinist in the glass works carefully copied this drawing and Edwards took the copy to Samuelson.

Inspired by the unusual form of the bean, and knowing as well that it would be a practical shape for molding and for bottling, Samuelson promptly executed the basic design of what was destined to become the world's most famous glass package.

Samuelson's original design, executed first in wood and later in glass, underwent numerous tests and modifications. The final design was patented in his name in Nov., 1915.

Meantime, other glass manufacturers had submitted other designs and the choice was put up to a committee of seven parent bottlers, headed by Veazey Rainwater of Atlanta. The committee met prior to the 1916 bottlers' convention in Atlanta and after days of consideration, the Samuelson design became their choice. The new bottle—almost indis-

1923

1951

CARRY-HOME CARTON, basic to all beverage merchandising today, was originated by The Coca-Cola Co. in 1923. Today 20% of all the bottled Coke is in the handy familiar red carrier.

tinguishable from the one used today—went into production the same year and by the end of 1918 had replaced the old bottle in practically every plant in the country.

The bottle made a fortune for Chapman Root and his descendants. Not only was the Root company one of the principal suppliers, but the contract by which it turned the design over to The Coca-Cola Co., for licensing to other bottle makers, provided a royalty to Root of 5 cents per gross. This seemingly modest fee (Mr. Root declined an offer of 25 cents) the Roots largely invested in Coca-Cola bottling plants, mak'ng them one of the largest ownership interests today.

The Root bottle business was acquired by the Owens-Illinois Glass Co. in 1932 and Chapman S. Root, grandson of the founder, is today a member of the Owens-Illinois board of directors. He is also a director of nine Coca-Cola bottling plants.

Packaging precepts

The Coca-Cola bottle design is, of course, the jealously guarded private property of The Coca-Cola Co. But many of its other packaging developments have been of inestimable value to other bottlers and packagers in general.

The soft-drink bottling industry did not assume sizable proportions until the leadership behind Coca-Cola inspired the building of plants and machines which made it possible to sterilize bottles and to fill and seal them without the touch of human hands. Although Coca-Cola did not originate the crown cap, it helped perfect the cap and high-speed machinery for applying it, recognizing this as necessary assurance of a safe and sanitary drink.

Automatic washing devices had to be developed and they were—huge mechanisms as big as box cars, but nonetheless precision instruments, that deliver gleaming bottles, perfectly cleansed and thoroughly sterilized. The almost-fanatic insistence on purity and quality that permeates every operation also led to the development of the first see-through empty-bottle inspection machines and the RCA X-ray inspection machine that automatically rejects any filled bottles carrying impurities.

The distinctive "Georgia green" bottle is molded to close tolerances, to insure trouble-free handling in filling equipment that runs as high as 300 bottles per minute.

Having as its goal the idea of putting Coca-Cola always "within an arm's length of desire," The Coca-Cola Co., working with its suppliers, developed the merchandising beverage cooler from a wooden tub on four wobbly legs to the modern streamlined nickel-in-the-slot vendor that seems to be everywhere. The first red cooler appeared in 1929; by 1944 there were a million of them.

The carry-home container for multiple sales, now a merchandising "must" for every producer of beverages, was pioneered by Coca-Cola in 1923 with a six-bottle carton—the idea of Harrison Jones, now board chairman of the company, and was produced by the Empire Printing & Box Co. of Atlanta. At present, approximately 20% of bottled Coca-Cola is sold in "the home package with a handle of invitation." Design has been steadily improved through the years; a 12-bottle carrier of exceptional strength was a prize winner in the last Folding Paper Box Competition.*

Above all, the company's method of quality control is unique and the result a sky-high standard for the whole bottling industry to shoot at.

Aside from being the sole source of Coca-Cola syrup, The Coca-Cola Co. exercises only two vital controls over its bottlers. The bottler's contract obliges him to (1) put out standard-quality Coca-Cola, subject to the company's constant inspection and testing, and (2) use the trademarks "Coca-Cola" and "Coke" only according to the company's strict regulations.

Knowing that violation of either of these provisions will cause him to lose his franchise, the bottler pays heed when the company lectures him, as it constantly does, on such subjects as plant cleanliness and the need for elimination of "bums, crocks and scuffies"—the company's designations for worn bottles considered no longer worthy of the name "Coca-Cola."

* See "Folding Box Winners," MODERN PACKAGING, April, 1951, p. 171.

FIRST COCA-COLA sold was dispensed from fountain at Jacobs Pharmacy in downtown Atlanta in 1886.

TODAY, Coca-Cola makes any pause The Pause That Refreshes in the remotest corners of the world—thanks to packaging.

But it would be a mistake to assume that the bottler toes the quality line in trepidation; it is more an attitude of respect—respect for the millions of dollars that the company has poured into development of its quality standards and the proven fact that following these standards pays profits.

The company's research and development program, from which bottlers and their suppliers reap the primary benefit, is responsible for the improvement of detergent washing compounds, of water-purifying methods, of carbonation control and of high-pressure syruping devices. Right now a unit is being developed not only to reject scuffed bottles automatically, but to define the degree of scuffiness. Experimentation is also being conducted on a tempered bottle, to lengthen still further the useful life of the package. More than a score of traveling laboratories carry these developments directly to the bottling plants.

The company's engineering objective is defined as "to keep our facilities a little ahead of the best." When MODERN PACKAGING surveyed the then-new Atlanta Coca-Cola Bottling Co. plant in 1941,† it commented: "Until robots can think and talk and choose like human beings, this bottling plant is as automatic as a packaging plant can be." It was found that the per capita output of each person in this plant engaged in packaging was upwards of 20,000 bottles per day.

Advertising and promotion

The record shows that Asa Candler was short-sighted in many respects in his estimation of the future of Coca-Cola. But he shared with poor John Pemberton a firm belief in the power of advertising and thus, in his 28 years as head of the company, laid the groundwork of promotional practices that, along with quality of packaging and product, account to a large degree for the success of Coca-Cola.

The famed slogan "Delicious and Refreshing" dates from Candler's earliest association with Coca-Cola, in 1889. By the turn of the century he was erecting spectacular billboards in the form of Coca-Cola glasses 30 ft. tall in ball parks and giving away millions of souvenirs—Japanese fans, trays, match books, blotters—bearing his already well-established trademark. Perhaps his most effective early idea was the distribution of millions of tickets good for a free Coke at any fountain—for which Candler promptly reimbursed the fountain owner.

By 1896 Candler had put $80,000 into promotion; as early as 1911 the advertising budget had passed $1 million a year. Since 1947 the amount has been approximately $15 million per year. Regular schedules have appeared in newspapers since 1887 and in magazines since 1904. Radio has been used since its infancy, in 1927. The total of company advertising expenditures to date—$240 million—does not take into account the amount, probably equally great, spent by bottlers.

Modern advertising for Coca-Cola has been characterized by continuity, consistency and restraint. Though it has long used the "pretty girl" theme and the "bathing beauty" motif, it handles these elements with consummate good taste. In recent years there has been heavy emphasis on sports subjects, but here, too, the pretty girl is not neglected. The typical poster-style ad shows a smiling and lovely creature, in a pleasant interlude from golf or tennis, obviously enjoying "The Pause That Refreshes." That phrase, one of the most famous in all advertising, is only 22 years old; the equally famous "Delicious and Refreshing" is still used also.

Coca-Cola, through its bottlers, is also a very heavy user of posters, signs and point-of-sale displays. The company has always recognized that its product was purchased largely on momentary impulse, for which the point-of-sale suggestion, properly handled, can be a powerful stimulus. One of its displays won a Silver Award in the 1937 All-America Packaging Competition.

Since 1941 the trademark "Coke" has been given almost equal prominence in advertising with the full name "Coca-Cola." This is the result of a curious set of circumstances. In a long series of legal battles, The Coca-Cola Co. lost the exclusive right to the "cola" part of its trademark, but in the meantime "Coke" had become almost universally used by the public as an abbreviation for "Coca-Cola" (in spite of the company's original opposition to nicknames) and the company finally recognized this, registered it in 1945 as a trademark and won legal backing for its view that anyone calling for Coke should receive Coca-Cola and nothing else but.

ONLY PACKAGE USED by The Coca-Cola Co. itself is the familiar gallon jug that conveys syrup to soda fountains. Fountain business now accounts for only 19% of Coca-Cola syrup sales.

Management

One probable reason why Asa Candler was willing to sell out for what now appears to be a piddling $25,000,000 was that he apparently never recognized the potentialities of growth through packaging. The fountain business was his first and constant love.

By 1900, soon after bottlers like the Biedenharns, Thomas and Whitehead had taken the packaging initiative, only one drink of Coca-Cola in 100 was sold in a bottle. Things changed rapidly after the new ownership, headed by Ernest Woodruff, took over in 1919. By 1928 bottled and fountain sales were approximately equal. Since then the bottle has steadily gained until today it accounts for 81 sales out of 100. Fountain sales have by no means slipped—but the great growth has been in the package.

The Woodruff management represented a new era for Coca-Cola in many ways. After four years, Ernest *(This article continued on page 162)*

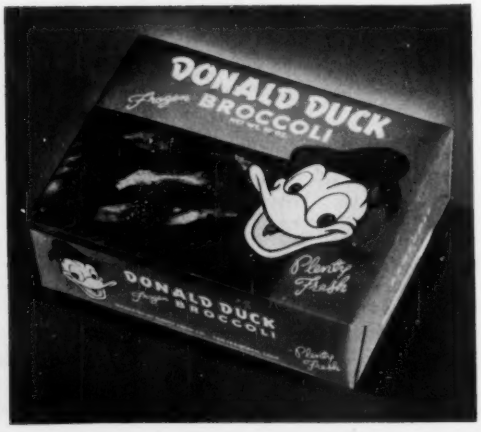
† See "Robot Plant," MODERN PACKAGING, Oct., 1941, p. 91.

Polyethylene flask with the look and feel of leather

A realistic effect is created by this new brown polyethylene flask with its simulated grained-alligator surface, recently introduced by Parfum Charbert for its "Of Thee I Sing" men's toiletries. The plastic spray bottles duplicate in polyethylene the former glass bottles with grained-leather covering and are reported to be 144 grams lighter than the glass containers, with the additional advantages of the squeeze-bottle spray mechanism and unbreakability. Labels are color engraved in white directly on the polyethylene. Closures, made of urea plastic, are nickel plated and chrome coated. The new plastic bottles, introduced last month, are being merchandised in a counter display carton holding 1 doz. of the containers. For the traveler, Charbert is marketing a morocco-grained vinyl zipper kit fitted with a vinyl holder enclosing the three products packaged in the new containers—spray deodorant, after-shave lotion and talcum—together with a tube of shave cream.

CREDITS: *Plastic bottle and spray mechanism, Elmer Mills Corp., Chicago. Color engraving, Modern Art Printing Co., Brooklyn, N. Y. Closure, Colt's Mfg. Co., Hartford, Conn. Display carton, F. N. Burt Co., Buffalo, N. Y.*

Bright, bright red goes to the frozen-food case



Plenty Fresh Co., a new San Francisco firm whose line of quick-frozen fruits, vegetables and specialty items is now being distributed under the brand name, "Donald Duck," is taking no chances on its packages being lost in dealers' cases. The company has deliberately chosen a wrapper design whose colors will make it "scream" in contrast to the traditional frozen-food cool blues and greens. These new wraps sport red—a bright red background. Letterpress is used to print the wraps, utilizing the four process colors to reproduce the product vignettes and Donald Duck's grinning face (the brand's trademark), plus a special red for the background color. The wrapper is made of 32-lb. special frozen food paper, waxed after printing to 43.5 lb. weight with a non-flaking, high-gloss wax.

CREDIT: *Wrapper, Western Waxed Paper Co., Div. of Crown-Zellerbach Corp., San Leandro, Calif.*

HISTORIES

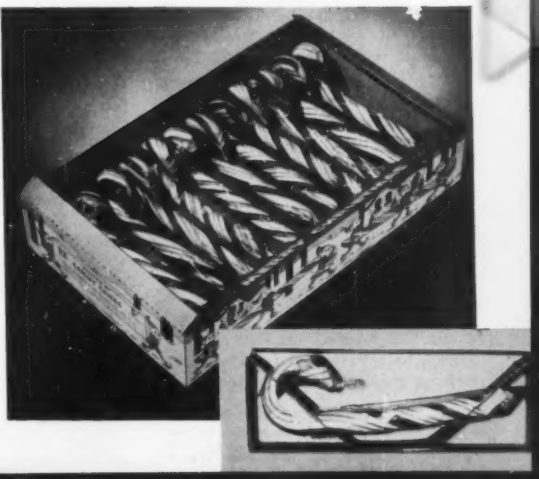
A wall dispensing polyethylene squeeze bottle

A wall-bracket dispenser unit, believed to be the first one designed to hold a polyethylene squeeze bottle, is featured by Winthrop-Stearns, Inc., New York, in a special promotional package for one of its products. Created for "phisoHex"—a sudsing, anti-bacterial detergent used by doctors, dentists and nurses for prophylactic cleansing of the skin and also by patients with skin infections—the package contains the bracket and a filled bottle which comes with a double phenolic closure so that it may be used either as a conventional squeeze bottle or as part of the dispenser unit. The bracket, injection molded of ivory-colored polystyrene, is made in two parts: a base that is attached to the wall with screws and a rotating arm. At the end of the arm is a threaded receptacle with a pinpoint orifice. The illustration shows the bottle screwed into this holder and how it is tilted when used. The green-tinted polyethylene used for the bottle is semi-transparent, thus the fluid level is easily checked.

CREDITS: *Bottle, Plax Corp., Hartford, Conn. Bracket, Crellin Plastics Co., Chatham, N. Y. Double closure, Grigoleit Co., Decatur, Ill.*

New container reduces candy-cane breakage

Christmas candy canes have always been a packaging problem because of their fragility. Confectioners have tried many types of packages in efforts to reduce cane breakage with varying degrees of success. This year, however, patents have been applied for on a new type of package said to have virtually eliminated breakage. Majestic Confections of Philadelphia is one of the first companies to use the pack which consists of a flat, die-cut sheet, printed in two colors, that is designed to fold quickly into a safe, attractive, easily filled carrier. Each cane is locked into position so that it has no contact with the sides or the bottom of the container. Detail of the construction of the container is shown in cross-section illustration at right. A plain chipboard sleeve covers the container for packing.



CREDITS: *Design, Gerry Powell, New York. Container supplied by Workman-Powell, New York.*

Dissolving package

SPECIAL FILM CONTAINING SEMI-SOLID PIGMENT IS MISCIBLE WITH THE PAINT IN WHICH IT IS MIXED

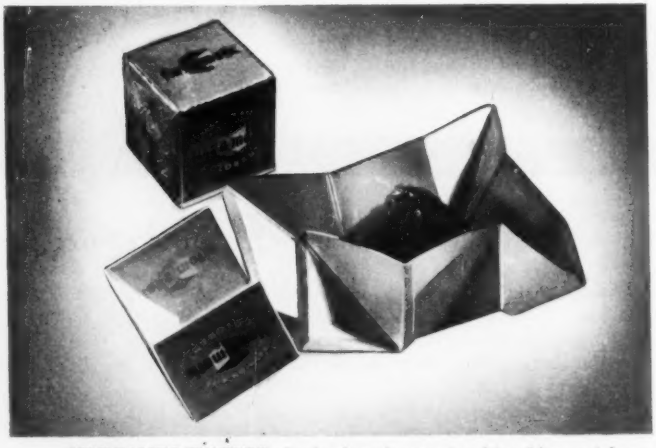
FILM-WRAPPED CUBE is dropped into base paint, assuring absolute accuracy of formula for correct matching of colors without waste or messy handling. Wrapper with feminine appeal is designed for use on base paint cans by Tint-A-Matic licensees, imprinted with each paint company's name.

A striking new application for a miscible package—the kind that dissolves in the mix—is a transparent wrap for new cubes of semi-solid color concentrates to be added to base paints at the time of purchase in the retail store.

The McCabe Paint & Varnish Co., Irvington, N. J., was the first company licensed to distribute the Tint-A-Matic colorants and special base-paint mixtures which constitute one of the latest developments in modern methods of merchandising paints. Four other paint companies throughout the country have also been licensed to market these products.*

The outer package consists of a cellophane-wrapped, cube-shaped carton measuring approximately 1¼ in. (in the size sufficient to color a 32-oz. can of paint) which contains the cube of colorant wrapped first in the miscible film and then overwrapped in lacquered glassine. The protective, vinyl-coated carton is of a special construction to provide what is called a "self-baling" principle—that is, opening out flat after one flap is released so that contents may be removed with a minimum of handling. The glassine wrap over the miscible-film cube is provided to give additional protection to the colorant in case of breakage in shipment.

The chief advantage of the miscible unit, of course, is the accuracy of formula it permits in matching colors correctly for the consumer. Since the entire premeasured cube of colorant, wrap and all, is dissolved in the can of base paint at the time of purchase, there is absolutely no waste, the company claims, such as occurs with containers from which a viscous colorant must be emptied, due to the quantity which clings to the inside of the package.



SELF-BALING FEATURE of cube-shaped carton is achieved by special construction, permitting contents to be removed with minimum handling.

With the new package, it has been possible to build up an entire paint-color system with the assurance that each cube coded by number to a matching color swatch will provide the consumer with the desired shade of paint that has been selected. It also permits the dealer to have a complete paint department with a full selection of fashion colors within 5 by 3 ft. of space, whereas a traditional department of ready-mixed paints occupies about 25 by 6 ft. of space.

This packaging is the result of more than a year of development by R. C. Rhines, originator of the new paint-coloring system and president

*Bruning Bros., Inc., Baltimore, Md.; Mobile Paint Mfg. Co., Mobile, Ala.; Rockford Paint Mfg. Co., Rockford, Ill.; Perfection Paint & Color Co., Indianapolis, Ind.

of the Tint-A-Matic Co. Associated with the American Marietta Co., Mr. Rhines had been in the paint business for years. Upon his retirement from this company, he began experimenting with color concentrates. Through the aid of the State of New Hampshire's program to encourage local industries, he was directed to the laboratory of the University of New Hampshire where the new product, called Tint-A-Matic, was perfected under the direction of Dr. Joseph Seiberlich, a German scientist formerly with I. G. Farben.

Many types of miniature containers were considered, but none provided the desired accuracy of application or the ease of handling that was suggested by the possibility of the miscible film wrap which could be dropped with contents right into the mix and would dissolve in the batch with no messy handling of the coloring matter.

After months of experiment, the company has developed a suitable film which it casts itself and which is miscible due to a special solvent included in the oil-base paint. The composition of the film has not been revealed. Previous miscible packages, used in industrial batch mixes, have employed polyethylene or S-polymer film.†

Surface design of the package, which reminds one of a tiny multicolored toy building block, was under the direction of the company's color consultant, who worked out a complete color coordination system for the new concentrates carefully styled to leading fashion colors in the home furnishings field—a program which won the 1951 Trail Blazer award of the Home Fashions League.

A comprehensive system of swatches and color-sample books has been provided for use by the dealer at the point of sale and for purchase by the consumer so that she may select the exact shades by coded numbers. Every color carries a cross reference showing what particular home furnishings items are also available in each particular shade.

When the desired color is selected the dealer simply opens a can of the base paint, drops in the miscible-film-wrapped cube with its contents, puts the can in a specially designed mixer for eight minutes and the consumer has the mixed paint—either gloss, semi-gloss or flat, as she designates, ready to take home. There is no messy transfer from one container to another and no messy handling.

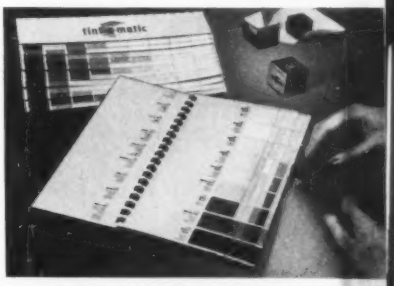
Specially designed display units are arranged for the dealer to stock a full line of the colorants in the 3 by 5 ft. of space. Some of these units are made to operate on a semi-automatic principle; when one packaged cube of the colorant is removed another immediately slides into position for the next purchase. The cube-shaped packages are supplied in two sizes for two sizes of paint cans.

Another part of the program was the designing of a special wrap-around label for the base paints sold through Tint-A-Matic licensees.

The reverse side of the label is reserved for printing the name of the paint company licensed to distribute the Tint-A-Matic products. The design of the label has a more feminine feeling to appeal to women. It also has a place for the imprinting of each purchaser's name, color, batch number and date of purchase.

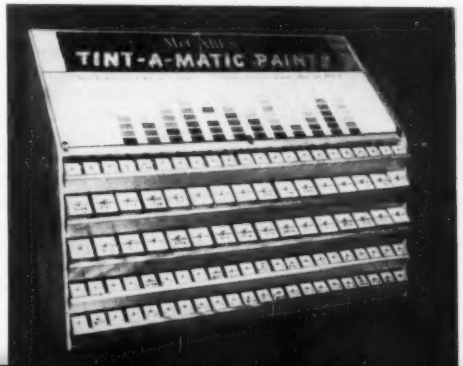
At present the packaging is being done by hand. The color concentrates are formed into large blocks, which when kept at a sufficiently low temperature may be cut into cubes like butter or cheese. These cubes are cut to size according to correct weight and first wrapped by hand in the miscible film, wrapped again in glassine for added protection, then placed in the self-baling cartons and cellophane overwrapped. As production demands, the company expects to install automatic equipment.

CREDITS: *Cartons, Nashua Paper Box Co., Nashua, N. H. Cellophane, Sylvania Div., American Viscose Corp., New York. Wrap-around labels, Brady Palmer Printing Co., Brooklyn, N. Y. Display vendor, Davidson-Hansen Co., New York. Illuminated counter display, Display Designers & Producers, Inc., New York. Color consultant, package design and merchandising program, Rahr Color Clinic, New York*



COLOR SYSTEM for matching Tint-A-Matic colorants to home decorating colors, devised by the company's color consultant, won 1951 Trail Blazer award, presented by Home Fashions League.

POINT-OF-SALE AIDS help licensees to present the story of the new Tint-A-Matic colorants to dealers and consumers.



VENDOR UNITS provide dealer with a complete paint department in 5 by 3 ft. of space. They operate on a semi-automatic principle; when one cube of colorant is removed, another one slides into position.

†See "Disappearing Package," MODERN PACKAGING, Aug., 1949, p. 81.

STOCK MOLDS for glass assured quicker delivery. Economical bronze-gold-sprayed standard urea caps complement the gray and gold decor of labels and cartons. Ultra fine-screen engraving provides finest reproduction for delicate lines.

Round-table planning

A MEETING WITH SUPPLIERS LIKE THIS ONE CONDUCTED BY MORTON MFG. CO. MAY BE THE ANSWER TO MANY DIFFICULT PROCUREMENT PROBLEMS

Today, when the choice of packaging materials is becoming steadily more restricted and deliveries increasingly uncertain, all packagers contemplating the introduction of new packages or new products might well follow the procedure adopted recently by the Morton Mfg. Co., Lynchburg, Va.

Anxious to expedite the packaging of a new line of cosmetic preparations marketed through its Blair Division, this company reasoned that it could greatly speed up the procurement of cartons, labels, bottles, ceramic decorations and closures if it could get potential suppliers together at a round-table conference with the designer from the beginning, to obviate the choice of any "problem" material.

Accordingly, the company contacted its regular suppliers and invited them to meet with a Morton executive and the designer at a series of conferences in New York. These meetings required the better part of two days before the various possibilities in respect to the packaging of the nine new products could be explored and settled, but they enabled Morton to get into production within a matter of weeks rather than months. At the same time the meetings permitted the development of a series of packages which should not be seriously affected by further development of shortages, so far as can be foreseen now.

Each supplier was briefed in advance on the essential requirements of the program and asked to sub-

mit samples for discussion at the meeting. The problem, of course, was simplified in that the user did not solicit competitive bids, but decided in advance to rely on regular suppliers for each package component.

The most advantageous part of the procedure, participants agreed, was the opportunity afforded each supplier to advise the purchaser on his product in relation to all the other package elements. This settled in two days many questions which it would have taken Morton several weeks to find out by mail and telephone.

The first decision was the choice of glass bottles from stock molds, which obviously assured quicker delivery. The bottles were also selected with an eye to Government standardization recommendations (which may eventually become mandatory). By careful study, it was possible to choose five mold sizes to handle all nine products in the line.

With a closure representative present, it was a simple matter to determine the kind of standard closures that would be suitable to fit the bottles. Following the selection of the bottles and closures, the carton, set-up box and label representatives were there to estimate requirements.

With this groundwork, the designer had a comprehensive idea of the whole program and was prepared to work out a design not only in keeping with the character of the products, but suitable to the packaging materials to be used.

The project consisted of the planning of packages for nine items, six in a treatment line and three for what is called a "costume" line, consisting of cologne, perfume and sachet. All of the items are planned for door-to-door direct selling. Therefore, the design could be handled with more restraint than is sometimes feasible for cosmetic lines designed for over-the-counter selling and with more delicacy than packaging that must withstand constant shop wear. It also demanded high styling and good taste in keeping with the increasing discrimination in rural and urban areas.

A gray-and-gold color scheme against a pure white glossy background was selected for the paper labels and varnished cartons. These neutral colors, the designer felt, would suit a wide variety of tastes and would blend well with a variety of colors on users' dressing tables, besides imparting a feeling of luxury with the use of gold. A delicate pencil technique was adopted for the herringbone border. A crest in gold and gray gives dignity to the packages. To provide the finest reproduction for the delicate pencil hatch lines, an ultra-fine-screen engraving technique was used.

Gold was also selected for the closures, but to give the "costume" items a more luxurious appearance, the urea plastic caps for these products are polished-brass faced, whereas those for the treatment packages are gold-bronze sprayed. It was determined in advance that, should brass become unobtainable, the sprayed caps could also be used on all of the packages without disturbing design continuity.

Folding cartons were selected for all of the products except the perfume, which is being featured as a gift item in a two-piece, set-up box with gold-covered extension-edge base and die-cut platform. Inside flaps of the cartons are used to advantage with printed messages to cross-advertise related and suggested companion products in the Blair de Luxe line.

Varnished paper labels carrying out the gray and gold design theme are used for all of the bottles in the Blair de Luxe line, whereas ceramically applied gold lettering is to be used on the cologne, perfume and sachet bottles to give a more elegant effect.

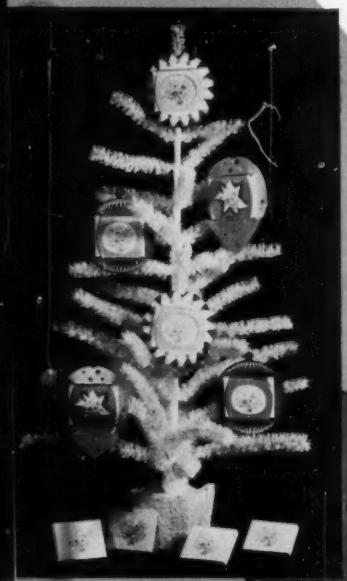
CREDITS: *Design, Josephine Von Milkos, New Canaan, Conn. Bottles, Carr-Lowrey Glass Co., Baltimore, Md. Cartons and paper labels (Fidelitone Process), Lord Baltimore Press, Baltimore, Md. Ceramic decorations on glass, Carr-Lowrey Glass Co. Baltimore, Md. Urea closures, Colt Mfg. Co., Hartford, Conn. (sprayed by Pyramid Industrial Finishing Co., New York). Metallic closures, Richford Corp., New York. Set-up boxes. F. N. Burt Co., Buffalo, N.Y.*

PRINTED MESSAGES that are placed on inside flaps of the carton provide an interesting way to cross-advertise related items in line.

Packaging

1

1 A treasure chest is an appropriate gift package for the handsome leather wallets made by Firmin Leather Goods Corp., New York. The chest is fabricated from a sheet of rigid transparent cellulose acetate with die-cut paperboard for the sides and insert platform. The decorative design on the acetate is silk screened in gold-colored ink. Package, Acetate Box Corp., Brooklyn, N. Y., using Monsanto Chemical Co. "Vuepak" cellulose acetate.



2

2 A festive gift package that doubles as a Christmas tree ornament has been designed by Eaton Paper Corp. for the company's informal note papers. The packages, trademarked "Gift Dangles," are die-cut paperboard units printed in silver and Christmas colors. The transparent acetate box containing the note paper is slipped into the unit in such a way that the floral design printed on the paper shows through the die-cut opening, becoming part of the design. Package, Einson-Freeman Co., Inc., Long Island City, N. Y. Acetate box, Transparent Fabricators, New York.

3

3 A bright red plastic "tree" with olives mounted on its prongs extends the height of a jar of Re Umberto brand selected Spanish olives introduced by Strohmeyer & Arpe Co., New York. Tree can be lifted out with olives attached for serving and may be re-used for cocktail snacks. A spot label above the major label calls attention to the new feature, while main label explains additional uses for the "tree." Bottle, Owens-Illinois Glass Co., Toledo, Ohio. Closure, Crown Cork & Seal Co., Baltimore, Md. Labels, Meehan-Tooker Co., New York.

4

4 Big eye appeal for small-size packages is achieved by the new family-designed cartons for Albert Ehlers, Inc.'s line of 24 spices. Product name is prominently printed on the window cartons in large, easy-to-read letters on the front, top, bottom and sides to facilitate self selection. The cellophane window shows off contents and adds decoration to the design. Cartons, Robert Gair Co., Inc., New York.

5

5 No shopper can miss the association of America's No. 1 summer dessert with the rich, red strawberries printed on the opaque ends of Continental Baking Corp.'s Hostess Shortcake Cup package. The combination cellophane-glassine wrapper conceals the tray inside, but permits complete visibility of product. Wrapper, Milprint, Inc., Milwaukee, Wis.

Pageant

6

6 Difficulties in printing polyethylene film are reported to have been overcome by the development of a special new process which permanently anchors the ink to the film. The process has been used in printing the polyethylene pouches for Ad. Seidel & Son, Inc.'s "Trail Packets," containing food products to take on camping trips. Smear and damage to the printed identification and instructions on these packets encountered previously have been eliminated completely, the company states. Packets "Perma-Process" printed by Milprint, Inc., Milwaukee, Wis.

7

7 New full-color decalcomania transfers which are fired right into the glass have been used to label Charles of the Ritz "Spring Rain" cologne bottles. The decals, representing stylized spring flowers, are reported to last the life of the bottle. "Thermo-cal" decals, The Meyercord Co., Chicago. Bottle, Carr-Lowrey Glass Co., Baltimore, Md.

8

8 Crisp, flavorsome pretzels whose "oven bloom" is protected by vacuum packing are now being offered by The Quinlan Pretzel Co., Reading, Pa. The company is believed to be the first in the pretzel industry to use a vacuum-pack tin for the product. The 12-oz. lithographed can has a key opening. Can, American Can Co., New York.

9 Sales appeal coupled with protection was the packaging problem Arp Nursery Co., Tyler, Tex., faced in marketing its rose bushes. The answer was found in this specially developed duplex bag constructed with a siftproof bottom. The printed outer sheet with its pictorial product identification is combined with an asphalt paper liner which is reported to insure product protection and reduce moisture loss to a minimum. Bag, Union Bag & Paper Corp., New York.

9

10 Zippo Mfg. Co.'s new "Leather-Crafted" lighter makes its debut in a box that features an unusual three-way display panel. When the box cover is removed, the upper part of the panel stands upright above the lighter. As the top of the panel comes into this position, the lower section—beneath the lighter—rises, tilting the lighter to an easy-to-see angle. Finally when the lighter is removed, the bottom section of the panel on which related-item sales copy is printed comes into view. Package, Dennison Mfg. Co., Framingham, Mass.

10

Canned fresh

FRESH from the trees in the irrigated Arizona garden of Desert Treasures, dates now go directly into cans, where their flavor and goodness are preserved indefinitely by a special processing method.

For the first time the toothsome flavor of fresh dates has been captured in a package by a new process of commercial canning that retains, it is said, both the appearance and flavor of garden-fresh dates. Two companies—Long's Date Gardens of Pasadena, Calif., and Desert Treasures, Tucson, Ariz.—are the pioneers who worked with the U. S. Dept. of Agriculture and a can supplier in the development of this process.

The end result of this canning process permits people living in areas other than the tropics to get acquainted with the succulence of fresh dates by making them available in a package that maintains freshness and softness for an indefinite period. At the same time, it makes them a profitable item for sale by the corner grocer or the supermarket at prices equivalent, it is claimed, to any food staple. It will make date shipment possible for the first time to men in the Armed Forces in Korea or any place in the world.

Experiments in fresh-date canning have been under way since the 1930s. This present method was first used in 1949 in pilot operations at these two plants in which 75,000 lbs. were canned. Now success has been thoroughly demonstrated with a 1950 pack of 200,000 lbs.

In the days of Solomon, dates were a delicacy of kings and until recently have been enjoyed by the favored few as an imported rarity for festive occasions. Still more recently the dates were picked in bunches and packed tightly into wooden crates. They were shipped then from their native Levant States—countries on the eastern shore of the Mediterranean from Egypt through Turkey—to the United States where the grocer plunked the box wide open on his counter and dates were broken off in desired amounts from the squashed clusters.

It was about 1900 that first attempts at growing the date palm commercially were attempted in America. However, almost a hundred years ago a few trees were brought in during the Spanish ownership of California, coming in by way of the southern border. Recent reports show that 600 acres in Arizona and 4,000 in California produce dates for the United States on a much less expensive scale than the cost of imported ones.

Dates have been packaged in cellophane, paperboard, acetate, redwood—and these package forms are still being used. The thinking behind canned dates is simply this: Few in America knew, or even yet know, what a fresh date tastes like. To have fresh dates, the one desiring them had to order directly from a grower such as Desert Treasures of Tucson. That meant fresh dates were expensive, for they must be carefully packaged and shipped and expressed to the destination.

At the Desert Treasures plant in Tucson—where irrigation has turned a section of the desert into a veritable oasis—work has been carried on for several years in an attempt to develop a processing formula which would result in a biologically perfect product. It took two years to work out such a formula. But, while the canned fresh dates were biologically perfect, they had a bit of a scorched taste. The next problem was to see to it that this processing didn't influence the taste of dates.

This problem was tackled with the aid of research done by the U. S Dept. of Agriculture's Fruit and Vegetable Chemistry Laboratory in Pasadena, Calif. The research revealed that reducing the temperature under which the dates are processed, keeping them in cooking tanks for a longer period and putting them in cooling tanks immediately not only eliminated the scorched taste, but actually enhanced the flavor.

At the Desert Treasures plant the dates are canned without oxygen and pasteurized at a temperature of 170 to 212 deg. F., which is reported to be sufficient heat to destroy microorganisms. It was also found that the dates should be especially treated for water content before canning. Whereas California-grown dates must be hydrated in steam rooms overnight, the Arizona dates are so rich

PACKED BY HAND into 16-oz. cans after being washed, graded and pasteurized, dates are processed in the new, efficient cannery in Tucson, Ariz.

dates

VACUUM PACKED BY A NEW PROCESS, THEY MAINTAIN THEIR ORIGINAL FLAVOR AND PROVIDE A PROFITABLE ITEM FOR FOOD-STORE SALE

in moisture that they must go through a dehydrating period under dry heat.

The 40-by-50-ft. concrete block cannery now in operation at Desert Treasures is entirely new and efficiency has been upped seven times over. Previously in a 14-hr. day 50 cases were packed. Capacity today of the plant in an 8-hr. day is 300 cases of 24 cans each. This highly efficient cannery—with each of its employees an expert in his own line—and its modern, sanitary equipment and methods draws interested visitors from all over the United States.

If you follow the process of canning dates through the plant, you'll see that dates are first washed, graded, then pasteurized. The dates are separated into five grades: extra fancy, fancy, choice, standard and cooking. The lower grades are used for pastries, candies and the like, while upper grades are sold as confections and fruits.

Next the dates are hand packed into cans. The cans are then put in a machine that closes and vacuumizes to the extent of 25 lbs. of pressure. Without being vacuum packed, as was the case until the new plant started operations, the shelf life of canned dates was a good three years; now it should be considerably longer. This machine closes 50 cans per minute.

Without disclosing details of the process, William H. Taylor, owner of Desert Treasures, explains that cans are then put in steam-fed tanks for a period of time, taken out with a hoist and placed in a cold-water-circulating tank, to stop the cooking.

Following the cold plunge, cans are sent to a labeling machine which applies wrap-around paper labels at the rate of 500 cans per minute. The canned dates are cased for shipment, sent to food brokers, from brokers to distributors and to retail stores that stretch well beyond the borders of United States—Guatemala, Honolulu, Rio, Puerto Rico, even to West Africa, practically on the door step of the date palm's original habitat.

Mr. Taylor claims that there is no question of the advantage of canned dates. He maintains that canning is by far the most sanitary method of handling and merchandising them and that only canned dates retain the moisture and the flavor of the fresh date.

According to Dr. E. A. Beavens of the Dept. of Agriculture Fruit and Vegetable Chemistry Laboratory at Pasadena, tests conducted with pasteurization of fresh canned dates showed the cans free from spoilage after long periods at a temperature of 90 deg. F.

The successful canning of fresh dates is an accomplishment of great significance to both California and Arizona date growers, says Ted Buck, president of the California Date Growers Assn. Up to now fresh dates had to be moved East right after the harvest and often sold at sacrifice prices, or kept in costly cold storage, which inevitably raised prices to consumers.

CREDIT: *Cans and canning machinery, American Can Co., New York.*

PROCESSING TAKES PLACE after the cans leave the closing and vacuumizing machine. The filled cans are put into steam-fed tanks, taken out with a hoist, then placed into a cold-water-circulating tank to stop any cooking that might occur after the cans leave the hot-water tank.

ANOTHER PRODUCT packaged at Desert Treasures is fondant-stuffed dates, which are hand-placed by operators into wooden boxes. Only the top-grade dates are used for canning.

EASY-TO-CARRY package cuts down on deliveries and encourages more sales. This was FR's experience after repackaging its "One Shelf Dark Room" kit in a more convenient and smaller-sized box.

FR's improvements

REFINEMENTS IN PACKAGING OF A WELL-DESIGNED PHOTO-SUPPLY FAMILY SHOW HOW CONTINUING STUDY HELPS TO INCREASE SALES

The value of continuing packaging study to effect greater counter appeal and the consumer conveniences that mean greater sales is pointed up by recent packaging improvements made by the FR Corp., makers of photographic supplies.

Four years ago FR employed a top-notch designer to redesign its entire line of packages.* The resulting new family of packages in colors that broke away from tradition in the photo-supply field and gave strong recognizability to a trademark won immediate acceptance in the trade.

FR, however, was not satisfied to let things stand at that. The same designer was commissioned from time to time to design new packages fitting into the family pattern. In addition, each package or group of packages has been constantly reviewed with the aim of improving its merchandising purpose. In this program many things have been discovered.

Among the company's products are FR prepared liquid chemicals packaged for over-the-counter selling to photographic hobbyists. They went over with a bang in their colorful packages, but about a year ago the company went into a huddle with the designer and its public relations counsel to see if by a modification of the packaging they could increase sales still further. The suggestion was to take the bottles out of the cartons and display them "naked," similarly to the way drug, grocery and liquor stores display bottled goods so that the customer may see contents.

Skeptical, but willing to be shown, FR chose 24 photographic stores—some big, some medium and some small—and left a full line of FR liquid chemicals in mass display at eye level. In half the stores the bottles were left in the cartons and in the other half the cartons were removed.

Results were amazing, the company reports. In most stores where the bottles were displayed without the cartons, sales skyrocketed—in some cases tripling the business of the week before. The company was completely convinced that liquid chemicals sell better in open display of the bottles without the cartons. The reason, it believes, is apparent. Liquid chemicals are easier to prepare and to use. Therefore, when the bottles are visible, a picture is formed in the mind of the shopper, suggesting to him quickly how easy the product is to use and measure in its graduated bottle, how easy it is to open and reclose with a molded plastic screw cap—but with an

* See "Photo Chemicals," MODERN PACKAGING, Jan., 1948, p. 108.

original tamperproof seal assuring purity.

FR's collection of photographic supplies for the amateur called the "One Shelf Dark Room" also has gone through an interesting change as the result of the company's continuing packaging study.

Originally this combination package was put in a large two-piece, folding corrugated box measuring 24¾ by 20⅝ by 3¾ in. Because of its size, it was cumbersome for the purchaser to carry home and had to be delivered by the dealer to the consumer. This assortment has been repackaged in a smaller carton which is easier to carry. The company finds that the new package not only cuts down on deliveries, but actually encourages more sales, as customers like to buy things they can take out of the store with them.

The success of the "One Shelf Dark Room" package led the company to adopt another container with a convenient carry-home handle for the packaging of its Home Developing and Printing Kit.

Made of sturdy corrugated board and printed with a design that ties in with the FR family, this convenient-to-carry and easy-to-store package contains all the essentials for developing and printing roll film, including FR's latest model developing tank in which films can be developed in broad daylight.

Recently the company introduced a new kind of developer called Develochrome, said to "develop as it tones." To produce various color effects, the product is offered in red, yellow, blue, green or sepia. To put over this color-tone story at the point of sale demanded not only a distinguishing package for each of the five colors, but a display unit that would describe it at a glance. This was accomplished by designing a display around the five packages. Each carton, carrying the distinctive FR design and silhouette trademark of a man taking a picture, is printed in the identifying color of the Develochrome dye it contains. A picture appropriate to the color is shown on the back of each box. Similar pictures in each of the five colors are reproduced by silk screen on the die-cut display card, thus providing an instant tie-in with the packages. Each of the cartons contains three heat-sealed aluminum foil envelopes of the Develochrome powder and a larger sized polyethylene-coated paper envelope for hypo.

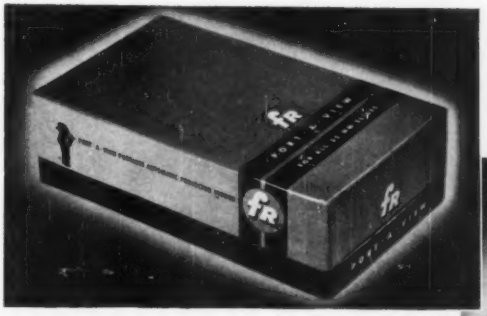
CARRYING HANDLE on package of sturdy corrugated board was adopted for the Home Developing and Printing Kit, holding all essentials for developing and printing roll film. Carton is re-usable as storage container.

Another new package in the line is a rectangular hinged set-up box designed as a member of the FR family for its new table viewer called "Port-A-View."

This package, suitable as a re-use storage container for the viewer, is shipped to the dealer in a white paperboard sleeve.

CREDITS: *One-Shelf Dark Room and Home Developing and Printing Kits—design, Jim Nash, New York; corrugated containers, Hankins Container Co., Cleveland, Ohio. Develochrome—display, Eminarr Display Co., Inc., Brooklyn; cartons, Rochester Folding Box Co., Rochester, N. Y.; foil envelopes, Milprint, Inc., Milwaukee, Wis. Port-A-View box, Manufacturers Box Co., New York.*

SPECIAL DISPLAY gets over color-tone story of Develochrome. Color pictures are printed in the five colors of the product.



SET-UP BOX with hinged lid provides a sturdy container for Port-A-View portable automatic projector table viewer, designed with family identity.

Now—

Pliofilm packaging machines for all types of products

Higher output, greater efficiency, more attractive packaging, lower unit cost—these are some of the advantages you get when you machine-wrap your product in PLIOFILM.

Shown here are just a few of the wide variety of machines now available for PLIOFILM packaging. Whatever your product, it will pay you to investigate these time- and money-saving devices. For further information, for names and addresses of machinery manufacturers, write: Goodyear, Pliofilm Dept., Akron 16, Ohio.

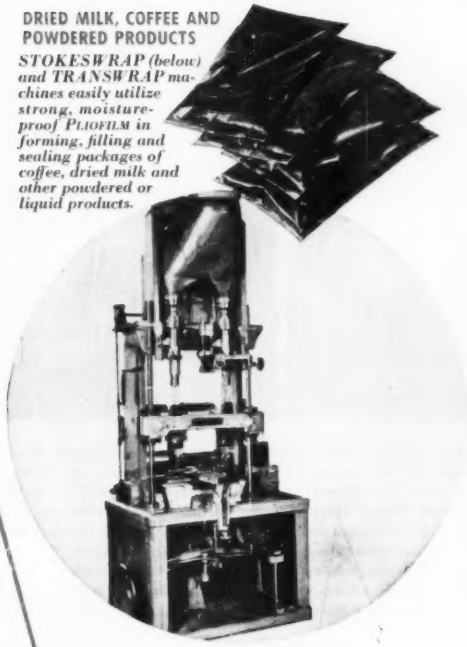
Good things are better in *Pliofilm*

3-way protection against air, moisture, liquids

Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

DRIED MILK, COFFEE AND POWDERED PRODUCTS

STOKESWRAP (below) and TRANSWRAP machines easily utilize strong, moisture-proof PLIOFILM *in forming, filling and sealing packages of coffee, dried milk and other powdered or liquid products.*



MEATS

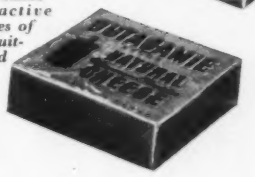
This versatile MOLDART machine uses PLIOFILM'S *strength and adaptability to wrap a variety of odd-shaped meat items in attractive pick-up consumer packages.*

DRIED FRUITS

This SIMPLEX machine is just one of many such bagmaking machines producing PLIOFILM *bags for dried fruit, nuts, produce and many other bagged items.*

NATURAL CHEESE

Overwrap your problem? This HAYSSEN machine and many others quickly produce low-cost, attractive PLIOFILM *packages of natural cheese, fruitcake, meat, fish and other products.*



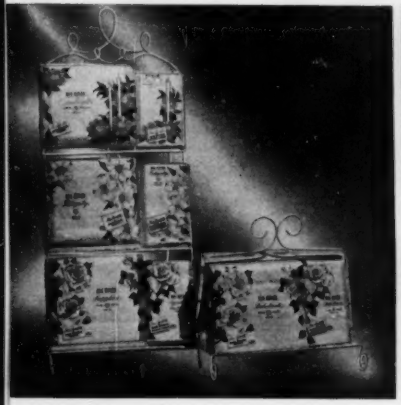
Ron Virgin Rum's coy little trademark character now appears on dealers' counters as a display piece. Weight of package keeps the die-cut card upright by resting on a scored tab at the feet with the hand around bottle. Display, Mercury Display Service Co., Brookline, Mass.

The concisely written and self-explanatory illustration printed on this handy, four-bottle counter merchandiser points out effectively the uses of Parke, Davis & Co.'s "Caladryl" lotion. Lithographed in seven colors, the merchandiser displays the bottles for ready inspection and impulse purchase. Display, Forbes Lithograph Mfg. Co., Boston, Mass.

A "never empty" easel display (patent pending) for cosmetic counters is distributed by Hudnut Sales Co., Inc. Actual-size, full-color reproductions of the packages, printed beneath the real cartons, give the illusion of a full display. Display, Kulay Advertising Displays, Inc., New York.

DISPLAY

Wire rack counter displays in two sizes show off Dan River Mill's new sheet and pillowcase wraps that are Pliofilm, rotogravure printed in four colors with a series of floral patterns. Display racks, Witch Craft Displays, New York. Wraps, Milprint, Inc., Milwaukee, using Goodyear Pliofilm.



Extra merchandising aids are included as a special feature with the attractive counter display carton pack used by Colonial Works, Inc. Brooklyn, N. Y., for its "Adhesium"—a multi-purpose wallpaper size. Each carton, which opens up to show twelve ½-pt. cans in a two-tier display arrangement, also contains a separate three-panel display card, envelope stuffers and give-away memo books. Display ideas are given in an attached folder. Display card and carton, Brooks & Porter, Inc., New York.

To bring its weather stripping, a hard-to-display item, "out front" Bridgeport Fabrics, Inc., now uses a bright-colored shipping container that doubles as a display. The weather stripping is mounted on a reel inside the container for easy dispensing. Container, The Finde & Dauch Paper Co., Sandusky, Ohio.

Pictorial-type display cards that illustrate the product uses and features are sent with all initial orders for bottles of Cameo, Inc.'s new liquid plant food, aptly named, "Green Thumb." Display card, Ray Vickerstaff Advertising Co., Toledo, Ohio. Bottle and closure, Owens-Illinois Glass Co., Toledo, Ohio. Label, Wheeler-Van Label Co., Grand Rapids, Mich.

New, small-size, lithographed tubes of Fulcrum Oil Co.'s well-known gun and reel oil for sportsmen are conveniently mounted on display cards that can either be hung or stood on a store counter. Tubes, Standard Collapsible Tube Co., Rochester, Pa. Display card, Baker, Jones, Hausauer, Inc., Buffalo, N. Y.

GALLERY

Seasonal promotion of its lawn-hose goods is stimulated by the eye-appealing counter display the H. B. Sherman Mfg. Co., Battle Creek, Mich., is making available to hardware dealers. Each section has bins to hold the actual items, plus shelves. The display is made of yellow corrugated board, printed in red and green. Display, Display Div., River Raisin Paper Co., Monroe, Mich.

Flips—new throw-away cigarette holder filters introduced by Elmira Filter Tip Corp.—are packaged six to a box. For dealers' convenience, 24 boxes are packed in this display carton which occupies only 5½ sq. in. of counter space. Boxes and display carton, Federal Carton Co., North Bergen, N. J.

K is for

NEW DESIGN stresses the family pattern and unmistakable product identification needed to meet the self-service display requirements of modern notions departments. The letter "K" as a decorative element forms the basic family tie-in and the famous Kleinert logotype is now restyled.

FORMER PACKAGES lacked a continuity in the presentation of the design elements and color among the different products introduced during the past 10 years. Items in the Kleinert notions line now number 250.

Today's "main floor" notions department in variety and department stores is a far cry from 30 years ago from the standpoint of both stock and sales volume.

Then, the stock of a notions department consisted almost entirely of items needed by home sewers for dressmaking—scissors, needles, thread, snaps, tapes and elastic. Later, notions became a sort of catch-all department where new lines of merchandise that didn't seem to fit in any other specific category were relegated.

In recent years the notions department has been sectionalized into well-defined product groupings with sewing aids in one group, ribbons and trimmings in another, closet and bath accessories as "shops" within the department.

One of the fastest-moving groups of merchandise now found in notions is one known in the trade as the "sanitary products line." An outgrowth of the original notions, the products in this line are small items that fastidious women want to complete their personal grooming, such as back and skirt shields for dresses, under-arm shields, make-up capes, shoulder guards to keep lingerie straps from slipping or cutting, sanitary belts and panties, shower and night caps, aprons, garter belts, etc.

Attractive and suitable packaging for notions generally—and for the items mentioned above particularly—contributes substantially to their salability, since competing brands are displayed more and more in ways that encourage self selection on the part of shoppers.

One of the leading manufacturers in this field, the I. B. Kleinert Rubber Co., New York, has been keenly aware of this situation and is now introducing the interesting results of an extensive program of package redesign for all its notions products. The

Kleinert's RIBBONY INITIAL IS KEYSTONE OF STRONG

BUT SIMPLE NEW PACKAGE DESIGN TYING TOGETHER LINE OF WOMEN'S NECESSITIES

new program is in addition to, and in many ways quite different from, the complete redesign of Kleinert's baby-products line done several years ago.*

The Kleinert company's basic objective in the notions redesign, started under the supervision of its advertising agency late in 1950, was to meet the needs of the growing trend for self service. Two corollaries of this basic objective soon became apparent: (1) the family design of the packages should be re-established and (2) the design should provide unmistakable product identification.

The constant introduction of new items in the Kleinert notions line had dissipated the effectiveness of the first package family design formulated in 1942. As items were added, various elements in the original family design had been modified or dropped from individual packages until the idea of a true family design all but disappeared. Thus, when the current project was discussed, Kleinert officials felt that the new design should definitely re-establish the items in a distinctive family package group which would be appropriate to the changes that had been made in merchandising notions.

The family pattern for the new packages is built around the use of the letter "K" as a decorative element in the design, the color scheme of shell pink and dark pine green, and a restyled version of the famous Kleinert logotype. These are combined into a simple design pattern that is adaptable to all the different types, sizes and shapes of packages—cartons, set-up boxes, paperboard envelopes, cards and inserts for transparent bags—used for the 250 items in the line.

In developing the letter K as the key element in the design, care was taken as to its shape so that its proportions would remain relatively constant regardless of its size as governed by the size of the packages. It is also located on larger packages so that the vertical stroke becomes a border for the left side of the package. This position is particularly effective from a display standpoint.

Although the new design was consciously planned to achieve eye interest in mass display, it is unmistakably feminine. The choice of pink as the predominant color was a concession to femininity, but the brilliance and the shade of pink are strong enough to emphasize the poster-like simplicity of the design. The styling of the K symbol to look like two pieces of ribbon draped into the shape of the letter also conveys a feminine touch. For this same reason, much of the copy is printed in a Bodoni type face, using lower-case italics to give a suggestion of script that would tie in with the modified

* See "It's For Baby," MODERN PACKAGING, Aug., 1945, p. 104.

VARIETY IN PACKAGE types, sizes and shapes is shown to emphasize the adaptability of the design. Products are put in visibility-type packages wherever possible. When visibility packaging is not practicable, illustrations are added on either the back or front panel, together with descriptive copy, to give as much information as possible about the product.

logotype of the redesigned packages.

A comparison of former Kleinert notions packages with the new ones shows that the company went back to very early packages to bring back the logotype as it was prior to 1942. Experience has shown that women remembered this early logo, according to the company, and that it could be "re-issued" with only minor modifications.

A good test of the new design's strength is found in the fact that the logo, the K and copy type hold their own regardless of color. An example is found even in packages where the K has been printed in black or gray, using a Ben Day screen tint; it still remains the dominating element of the design. Another example is its use on a new counter merchandiser display rack for hair nets where the symbol is printed on the package in reverse color.

Provision for product identification and use instructions received special emphasis in the redesign in line with the self-service objective. As the packaging of an individual product was reviewed, one of the first questions asked was whether the product itself could be shown. Although some such packages were already in use—as in the case of the cellophane-wrapped, die-cut envelope-cards holding sanitary belts—wherever it was feasible to change to a visibility package, the change was made. In some instances it was possible to use window cartons like the one for garment grippers which has the window on the back panel so that customers can see what the band looks like and check the color.

Where products are not visible in the package, illustrations are added, on either the back or front panel, to show what the product is and how it is used. Sometimes the illustration is a simple sketch; in other instances it is a halftone reproduction of a photograph.

When the illustration is to appear on the front panel it is cleverly positioned opposite the K symbol in a triangular patch, one corner pointing to the K to give the eyes a perfect "follow-through." The space on sides and inner flaps of packages are put to good use by printing cross-selling copy on them.

Back panels with illustrations and instruction copy are designed so that they can be used as the display panel without it being obvious that the package is turned.

This dual-display-panel technique has an important function from the merchandising standpoint because Kleinert's is making available to department stores a modern bleached-wood display fixture in which its sanitary line can be stocked for self service. The packages are placed in wire channel racks in this double-tiered case according to item and size. Each item is positioned in the case according to name tags below a line of illuminated color photograph transparencies of the individual products mounted on the back panel of the case.

Two interesting modifications in the package design that have been made since these cases have been installed in stores point up what can happen once a package is stocked in mass display.

The package for chafe guards was the first one to be redesigned and the design was positioned on the panels for the package to be displayed horizontally. But when the case was planned, to utilize its space most efficiently, the width of each channel required packages to be displayed vertically. The chafe-guard package is now being altered so that the K symbol, product illustrations and copy will be shifted to this new vertical position.

All of the subsequent designs were laid out with the thought in mind of their merchandising appearance in the department store case.

The modification in the use of color for one of the envelope cards used as the package for sanitary belts was likewise a change called for once the package appeared in the case. It was found that when flesh-colored belts were packaged in cards with pink as the background color, the belt simply "disappeared" into the pink; therefore these particular packages have the color scheme reversed to provide a dark green background that makes the flesh-colored belt stand out sharply in display.

It will be almost a year before all the 250 items in Kleinert's notions lines appear in the new packages, company officials estimate, but enough items are now in stores in their new packages to show shopper interest.

In some 40 of the department stores where the redesigned packages have been introduced with the new display case, it is reported that sales have shown increases as high as 500%.

The K symbol and logotype are also being stressed in Kleinert's national advertisements and in point-of-sale displays. In this way, the family design will be firmly established if and when the company wishes to adapt it to any of its other products in the future.

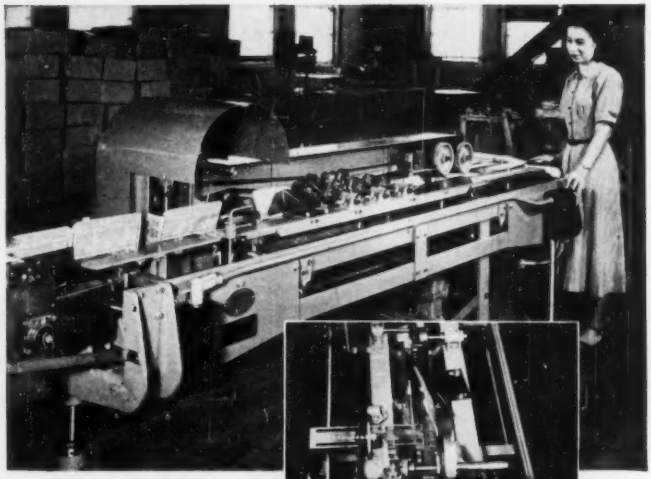
TYPICAL DISPLAY for the new nylon hair-net packages points up the poster quality achieved when packages are massed. Back piece of display featuring the K and revised logo uses the same pink and dark green color scheme as the packages, but in reverse.

CREDITS: *Folding cartons, Trenton Folding Box Co., Trenton, N. J., and Shuttleworth Carton Co., New York. Set-up boxes, Monroe Paper Box Co., Inc., New York; Wallace Paper Box Corp., Maspeth, L. I., and J. J. Dix, Inc., New York. Paper envelopes, P. L. Andrews Corp., New York; Cellu-Craft Products Corp., Flushing, L. I., N. Y., and Robles Transparent Products Corp., New York. Cards and inserts, Trenton Folding Box Co.; Shuttleworth Carton Co.; Arkay Printing Co., New York, and Lobel-Williams, New York. Cellophane bags, Cellu-Craft Products Corp. Unprinted cellophane, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.*

BURT makes cartons by the millions
– you'll be proud of yours

F. N. Burt Company Inc. • Manufacturers of Small Set-up Boxes, Folding Cartons and Transparent Containers • 500-540 Seneca Street, Buffalo 4, New York • Offices in Principal Cities Or Write Direct • Canadian Division: Dominion Paper Box Co. Ltd., 469-483 King St. W., Toronto, Canada

NEW ADJUSTABLE CARTON CLOSER



New Carton Closer in the Grocery Store Products Company plant. After being closed, cartons are wrapped on our FA machines.

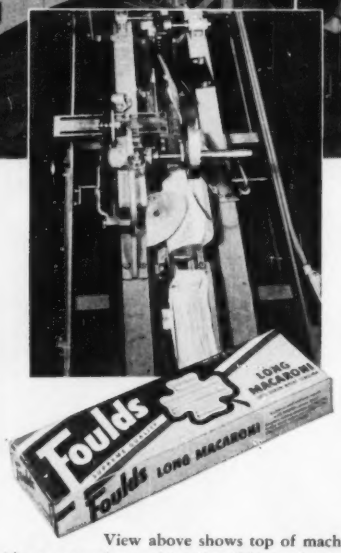
An Immediate Hit!

This is what users of plain tuck-top cartons and lined tuck-top cartons have been looking for—an ADJUSTABLE closer that can take care of a large range of sizes.

Our new Carton Closing Machine is meeting with enthusiastic approval and orders for it are coming in fast. One leading food company, on seeing what it can do, immediately ordered a large group of machines for its various plants.

The machine can be adjusted for a different size of carton by two simple hand-wheel adjustments. Its speed, ranging from 34 to 102 cartons per minute, is set by a single hand-wheel adjustment. Legs of machine can also be adjusted for height so it can be hooked up with any standard conveyor leading to the packing tables, filling machines or wrapping machines.

Its advanced method of operation assures tight closures, with liners neatly folded.



View above shows top of machine with rotary tucker making first fold on the inner liner. Can be adjusted for cartons within the following sizes by means of two hand-wheels:

Length: 3¼" to 14" Height: ¾" to 4½"

Width: 2½" to 9⅞"
(1⅞" possible with special parts)

Speed: 34 to 102 cartons per minute, depending on type.

Write for complete information

PACKAGE MACHINERY COMPANY
CARTON DIVISION
SPRINGFIELD, MASSACHUSETTS

NEW YORK CHICAGO BOSTON CLEVELAND ATLANTA DALLAS
DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

Free oil in packaged foods

A METHOD OF MEASURING RESISTANCE OF CONTAINER MATERIALS TO STAIN FROM THE PRODUCT.

By Arthur H. Landrock* and Bernard E. Proctor†

Before an efficient package can be designed for any particular product, accurate and thorough information must be obtained regarding certain characteristics of the product that dictate the packaging requirements. These characteristics cannot be completely evaluated from a formula analysis of the product alone, although such analysis is of aid to the packaging technologist (1)[1]. Among these characteristics are moisture relationships, gas evolution, odor, density, flowability and the ability of the product to stain a package.

To be efficient, a package must preserve the product for its normal shelf life, must display the product to the best advantage and must retain its original attractiveness throughout the period when it is in contact with the product. This last property depends largely upon the greaseproofness of the inner wrapper of the package. If the inner wrapper is not sufficiently greaseproof, the oils or fats in the product may soak through the inner wrapper and reach the outer wrapper, causing an ugly stain. Such stains are, in part, responsible for the development of rancidity in the product. If the level of protection is much too high, the product in question will be over-protected and the cost of the packaging materials will be excessive. Availability of packaging materials is also a problem in times such as these.

Definitions

The free oil or free fat in a product may be defined as the oil or fat that is available to stain a package. The free-oil content of a product differs from the total oil content by that amount which is, for one reason or another, not free to be absorbed from the product into the walls of the package.

The free-oil content depends upon such properties of the product as the amount of oil-absorptive material mixed with the oil portion; the overall particle size; the percentage of oil in chemical combination with the other components of the product; the melting point or range of the fatty portion; the viscosity of the oil; the temperature of storage; the moisture content of the product; the ability of the product to sift down to the lower portion of the container and exert pressure on the underlying layer and, last but by no means least, upon the total oil or fat content.

As there are so many factors affecting the free-oil content of a product, it is difficult, without some means of measuring the free-oil content directly, to evaluate the level of greaseproofness that the product will require in a packaging material. Comparison of a new product with an old one that appears similar in composition and has been satisfactorily packaged is seldom a reliable criterion for deciding upon a suitable packaging material. Generally the trial-and-error method has been used, but this method is always costly and time consuming and never exact or reproducible.

The free-oil content of food products has been a serious problem for industry for some time. It became especially serious during World War II, when paper and composite containers were widely used as substitutes for more adequate packages. Only recently has any attempt been made to establish a standard procedure for measuring free-oil content.

Couch (2), in 1948, outlined a method used by his laboratory which gave at least an indication of the free-oil content of a product. According to this method, a small quantity of the product was placed in an envelope formed from a single sheet of bond paper. The filled envelope was placed on a sheet of clay-coated paper in a cabinet maintained at 100 deg. F. Periodic examination of the envelope revealed whether the bond paper or clay-coated paper was stained. If no stain appeared in 72 hrs., it was considered that no grease resistance was required in the packaging material.

Recently a subcommittee of the Packaging Institute's Food Committee has been investigating this problem with the object of formulating an official test procedure. This subcommittee has done some excellent work

* Technical Assistant in Packaging, †Professor of Food Technology and Director of the Samuel Cate Prescott Laboratories of Food Technology, Department of Food Technology, Massachusetts Institute of Technology, Cambridge, Mass.

[1] Numbers in parentheses identify "References," appended.

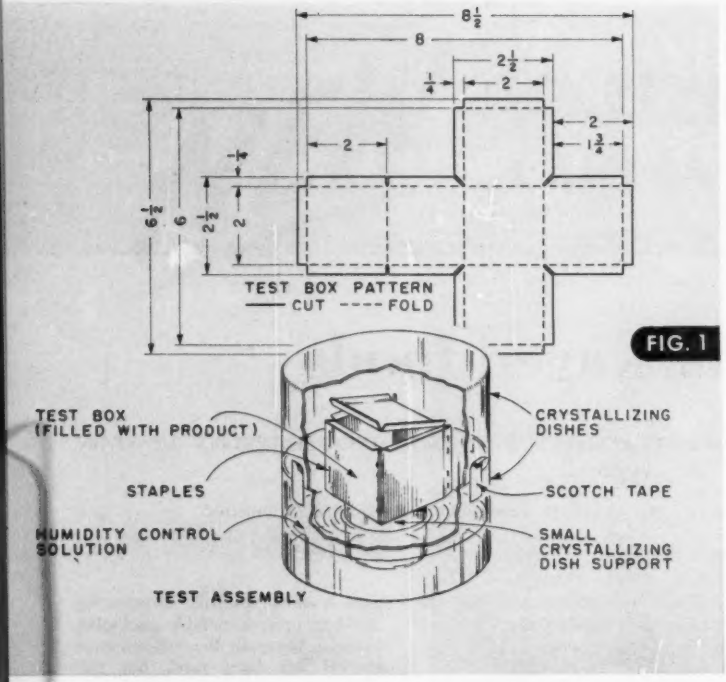


FIG. 1

but, because the project is still under way, no attempt will be made to summarize the techniques studied. However, all the methods investigated to date involve measurements of the area of the oil stain. Measurements of this type are misleading, for stains of identical diameters may be serious stains or slight stains, depending upon the concentration of oil in the stain. Furthermore a stain may be present on only one side of a piece of absorptive board or it may penetrate the board completely, depending upon the character and amount of oil or fat present.

A test for measuring free-oil content should be simple and yet thorough enough so that all variables influencing the free-oil content or the determination by a particular test procedure can be sufficiently controlled. It was, therefore, decided to try a method involving the use of a standard package made of the most absorptive material available. It was thought that if a food product were stored in such a package for a definite period under easily reproducible standard conditions, it would be relatively easy to extract the fat or oil transferred from the food to the package, and the amount of free oil released to the package could then be related directly to the weight of ether extract removed from the package after the test.

This method was originally suggested by Landrock (5) in 1948 and was more recently studied by Rymal (9) under the authors' direction. Because this method seemed to offer considerable promise (9), a study was made to determine the optimum standard conditions for such a test.

Experimental

The variables that might affect the amount of oil absorbed by the test container or that might affect the subsequent extraction process are:

1. Size and shape of container.
2. Absorptive quality of the material of which the container is made.
3. Amount of product put into the container and its distribution therein.
4. Particle size.
5. Test temperature.
6. Total oil or fat content of product.
7. Physical nature of the oil or fat, especially melting point and viscosity.
8. Test time.
9. Humidity-moisture relationship between board, product and test chamber.
10. Pressure exerted on container and product.
11. Extraction procedure.

To investigate and control the above listed variables, the following procedures were carried out.

Test container. The test container was a square, 2-in. box made of blotting paper or board. Experimentation produced a most satisfactory form of test box, easily held together with staples. The blanks for these boxes were cut according to the pattern illustrated in Fig. 1.

Food product tested. To facilitate study of the important variables that might play a role in the proposed test method, a single food product with a high free-oil content (pie-crust mix) was chosen. The pie-crust mix seemed to be ideal, for it has a high fat content (about 42%) and is easy to handle.

Test assembly. The test box filled with the product to be tested was placed in a crystallizing dish in a humidity-control unit (Fig. 1) and left there for a certain length of time before determination of the amount of free fat absorbed by the box.

Extraction. The free oil absorbed by the test box was determined by Soxhlet extraction. Although periods for Soxhlet extractions frequently last as long as 16 hrs., it was believed that a board sample that would so easily absorb an oil or a fat would release it just as easily under solvent extraction. Consequently it was hoped that a short extraction period would suffice. A simple experiment proved this to be the case.

Three test box blanks cut according to the pattern and dimensions shown in Fig. 1 were used. Over the surface of one blank, 1 ml. of melted

TABLE I—EFFECT OF LENGTH OF EXTRACTION PERIOD ON AMOUNT OF FAT EXTRACTED

Shortening added to test blank	*Extraction period (min.)*	*Total fat extracted* Grams	*Per cent*[a]
ca. 1 ml.	58.5	0.7983	98.9
	137.0	0.8052	99.8
	201.5	0.8058	99.8
	259.0	0.8076	100.0
ca. 2 ml.	63.5	1.6972	99.0
	123.0	1.7114	99.95
	187.0	1.7125	100.0
	250.5	1.7125	100.0
ca. 3 ml.	65.5	2.5962	98.9
	136.5	2.6233	99.8
	206.0	2.6253	99.95
	256.5	2.6263	100.0

[a] Based on assumption that all the fat was extracted at the end of the test (about 4 hrs.).

hydrogenated vegetable shortening was scattered; over the second, 2 ml. and over the third, 3 ml. The blanks were then cut into pieces and the pieces placed in paper thimbles in Soxhlet units, with glass wool on top. After approximately 1 hr. of extraction with analytical reagent petroleum ether, the flasks were removed for drying and new flasks containing fresh solvent were substituted. This process was repeated at 1-hr. intervals for 4 hrs. The assumption was made that all the fat was removed at the end of this time.

The results (Table I) indicate that at the end of the first hour about 99% of the extraction was complete and at the end of the third hour, 99.95%, irrespective of whether 1, 2, or 3 ml. of fat were extracted. Hence it was decided to use a 3-hr. extraction period with fresh petroleum ether.

Diethyl ether was not considered because it is expensive and dangerous to use; it extracts water-soluble materials (it is miscible with water, whereas petroleum ether is not particularly miscible), it has to be used in an anhydrous state and considerable effort is required to keep it in this state.

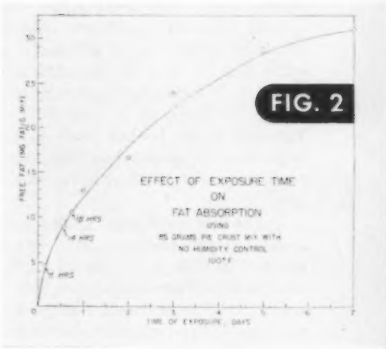
Exposure time. To determine the proper exposure time for a standard test, the amount of fat absorbed by test containers filled with the pie-crust mix was determined after 5, 14 and 18 hrs. and after 1, 2, 3, 5 and 7 days (Fig. 2). The temperature was held at 100 deg. F., but there was no humidity control. As was expected, the rate of absorption of free fat by the test container was most rapid in the shortest test periods. The slowing of the rate as the time of exposure was increased was undoubtedly due to the board becoming saturated and not to any serious depletion in the supply of fat in the mix, because a large amount of mix (85 gm.) was used. It was concluded that a two-day test period would be most suitable, for under these conditions an error of a few hours in exposure time would be negligible and yet the board would still be far from saturated.

Temperature. A temperature of 100 deg. F. should be optimum for a free-oil test, as many accelerated packaging tests are carried out at this temperature. Too high a temperature would undoubtedly result in the board becoming saturated quickly and would, therefore, rob the test of some of its sensitivity. Fig. 3 shows the results of a study of the effect of temperature on the fat absorption of the test container. As indicated on the plot, three distinct phases of fat absorption can be distinguished. In the first phase, at low temperatures, the fat (pie-crust mix) was in a solid form and consequently little was absorbed by the box. In the second phase, the fat was melted and readily absorbed by the board until such time as the board approached saturation, when the third phase was reached. Study of this curve shows the advantage of using a temperature of 100 deg. F. for the test.

Weight of sample. It was believed that a full box should be used in all tests, but that the same weight of sample should be used for all replicates. Because of the difference in the nature of various products that might be tested, wide differences in the weights of full boxes would probably be encountered. However, a study of the effect of changing the weight of the sample should prove helpful. Such a study was made and the results are illustrated by the curve in Fig. 4.

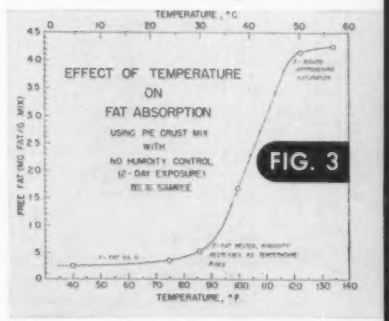
This curve shows that the fat from the pie-crust mix was absorbed at a considerably higher rate per gram of sample when the weight of the sample was small. This is logical when one considers that most of the free oil is removed from the product by gravity rather than by direct staining of the contact surface of the board through capillary action. This could be seen by studying the stain patterns on the boxes. When samples of large volume are used, the oil in the food at the top of the box has a longer distance to seep through the rest of the food before it drops to the bottom of the box. Some of this oil at the top does reach the sides and top of the box directly through capillary action, but a large part of the oil eventually reaching the upper end of the box is due to a wicking action of the oil from the bottom ends of the box. It was found that a reduction in sample weight from 85 to 80 gm. resulted in a decrease in the free-oil absorption of only 0.8%.

Humidity. In none of the preliminary tests described above was there strict control of the humidity of the air surrounding the test container, although the humidity may be considered to have been constant during any one test. It was expected, however,



that relative humidity would be an important factor and should, therefore, be controlled in a standard test. It is well known that when butcher paper is wet, its greaseproofness changes. For this reason it has been suggested (12) that some control be made of the moisture content of paper or film when it is being tested for grease resistance. Rymal (9) showed that relative humidity, except when moderately low, played a significant role in free-oil absorption of packaging materials. This effect is well illustrated in Fig. 5, where it can be seen that the free-oil content of the test container was almost doubled when the relative humidity was increased from 0 to100%. Glycerol solutions were used for the humidity control (3).

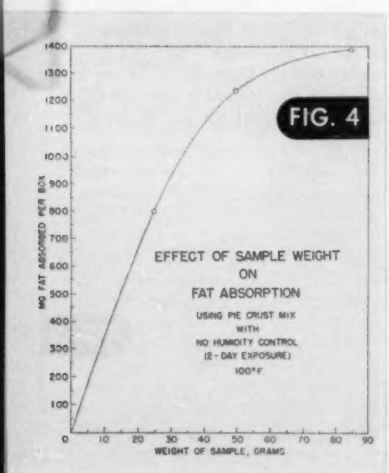
Variations in relative humidities below about 35% appeared to have no significant effect. Observations at relative humidities between 0 and 30% were not made, because data were not available in the literature to show the proper strength of glycerol solutions to be used in this range. There is a possibility that the slight dip in the curve at low relative humidities may actually be significant and not due to experi-



mental error. Dry food mixes frequently have an equilibrium relative humidity (ERH) around 20% and it is quite possible that the pie-crust mix stored in an atmosphere approximately in equilibrium with its own relative humidity would be less likely to release free oil than when there was some transfer of moisture in any direction.

Under the conditions of this test, moisture equilibrium was certainly not reached in most units. Therefore, the relative humidities indicated in Fig. 5 actually represent *initial* relative humidities of the test atmospheres and not ERH's. As equilibrium was not attained, undoubtedly a transfer of moisture was going on between test atmosphere, board and product in all cases. It should certainly be possible to condition board and sample to the relative humidity of the test atmosphere, but no great advantage would result and the necessary conditioning period would be long. Moisture equilibria curves would also have to be drawn for the board and the product. (6, 7).

As relative humidity was found to have such a pronounced effect, it was believed that both a high and a low relative humidity should be used, where practicable, for a standard test. It was decided to use relative humidities of 90 and 30%. The simplest way to obtain these relative humidities is by the use of glycerol solutions. Curiously enough, at 100 deg. F. a relative humidity of 90% is obtained by using an aqueous solution containing 30% of glycerol, and a relative humidity of 30% by using an aqueous solution containing 90% of glycerol (3). The only disadvantage of using glycerol is that the more dilute solution (90% relative humidity) supports, to a certain extent, the growth of micro-organisms. If sulfuric acid is used instead of glycerol, a relative humidity of 90% at 100 deg. F. will be obtained by using a solution having a specific gravity of 1.122, and a relative humidity of 30% by using a solution having a specific gravity of 1.420 (15), the specific gravities being measured at 15.5 deg. C. The specific gravity of the solutions should be checked occasionally and adjustments made in the concentration by adding water, glycerol or acid, as the case may be.



Varying fat content. Another variable to be studied was the effect of varying fat contents in the same food product. It was decided to use a mixture of a hydrogenated vegetable shortening and a bleached, enriched flour. The assumption was made that the flour contained 1.25% of fat (11). On this basis, samples of fat-flour mixtures were prepared having different fat contents. The fat was added in the melted state and was thoroughly mixed with the flour by kneading with the hands. Studies were made on these samples at 30% relative humidity. Unfortunately, the 85-gm. samples did not fill the boxes in all cases, for with the increasing fat content of the mixture the final bulk volume of the mixture decreased considerably.

Fig. 6 shows the results of this study. The relationship between free fat and total fat appears to be logarithmic, at least under the conditions studied. The equation shown in the lower right-hand corner of the graph holds only for the conditions and the product indicated. The letter n represents the slope of the solid line (the logarithmic curve) and A is the intercept. It is possible that n would always be constant for any product containing fat or oil. Perhaps the value of 2.94 should really be 3, indicating a true cubic relationship. These somewhat speculative ideas should be further checked in future work.

Pressure. One variable not studied for purposes of this report was pressure. It is well known that certain products, such as dog-food biscuits, release significant amounts of oil or fat only when placed under heavy pressure. This pressure may be easily exerted when bags are stacked one upon the other in large piles. Actually there is no reason why pressure could not be introduced into the test method as a variable. A simple receptacle can be made from wood into which the test box can be placed in such a manner that the blotting paper sides will keep their shape when pressure is exerted from the inside of the box. The pressure can be controlled by placing varying weights on top of the boxes.

Standard conditions

When all the above variables (except pressure) had been studied, a set of desirable standard conditions was adopted for use in studying actual food products. These standard conditions are as follows:

1. Test unit: as shown in Fig. 1, test box being made of Eastman Kodak photographic blotting paper.
2. Amount of sample: enough to fill the box; same weight for all replicates.
3. Temperature: 100 deg. F.
4. Relative humidity: 30% and 90%. If a choice has to be made, choose 30%.
5. Test time: 48 hrs.
6. Extraction: 3 hrs. in Soxhlet unit with analytical reagent petroleum ether. Dry all samples of board in desiccator before extraction.

Reproducibility

The reproducibility of results obtained under these standard conditions is shown by the data in Table II. According to statistical analyses, if a very large number of observations were taken, then 68.3% of the values would lie within the range of 1.4675-1.6857, 95.4% of the values would lie within the range of 1.3584-1.7948 and 99.7% of the values would fall within the range of 1.2493-1.9039. In other words, under standard conditions the consistency in the results is satisfactory.

Results and discussion

A representative group of 18 food products was selected for study under standard conditions (Table III). Many of these foods were known to be troublesome with regard to free oil.

As the average potato chip was too large to fit into the test box, it was necessary to crumble these chips to obtain reproducible results. The

TABLE II—STUDY OF REPRODUCIBILITY OF RESULTS

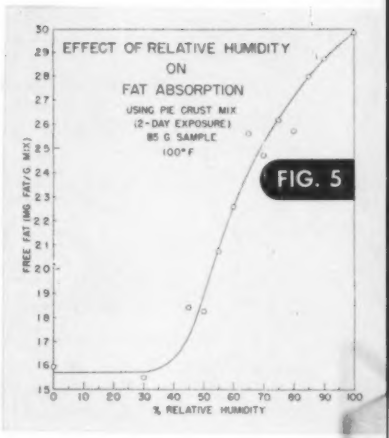
Conditions: *Pie-crust mix, 85 gm., 100° F., 30% R.H., two-day exposure.*
Results:

Sample No.	*Grams absorbed per box*	*Remarks*
1	1.6513	
2	1.4862	
3	1.6330	
4	1.6792	
5	1.4771	
6	1.4792	
7	1.6349	
8	1.7508	(highest value, 11.1% above mean)
9	1.5311	
10	1.3926	(lowest value, 11.6% below mean)
11	1.6267	

$\bar{x}$ = mean = 1.5766
σ_x = standard deviation = 0.1091

popcorn and the vanilla wafers were also crumbled, because of their size. Obviously results obtained on crumbled products will be somewhat misleading, but they should nevertheless be meaningful.

In most cases, plots were made of the stain patterns at the end of the tests. These stain areas will eventually be measured and compared with the data on free oil extracted. In the case of the Spanish paprika, the colored stain was visible in the form of thousands of tiny specks on the inside of the box only. Not enough oil was absorbed to cause the stain to penetrate to the outside of the box except in a few isolated spots. Cayenne, with a much higher oil content, gave a much more typical stain pattern. It is obvious that cayenne pepper constitutes a serious packaging problem, because of its high free-oil content and its bright orange color.



One of the interesting observations to be made as a result of these tests is the great increase in the amount of free oil absorbed by the test box at 90% relative humidity as compared with that at 30%. For 13 of the 14 foods tested at both humidities, the values are higher at the higher humidity. The average ratio of the values at 90% relative humidity to those at 30% is 2.08, which compares well with the ratio of 1.86 for the data plotted in Fig. 5.

The salted peanuts, which incidentally were purchased in a can, had a much lower free-oil value than was expected. This may have been due to a decreased oiliness in this particular brand.

The ready-mixes were studied because of their widespread popularity in recent years. The fat contents of these mixes are not known and were not determined, but it is expected that their free-oil contents will be a good gauge of their fat contents.

Although the dried whole egg had a high fat content (about 42%), the free-oil content was low, probably because the fat was bound to protein at ordinary temperatures. At high temperatures the fat can be seen leaving the egg product. This sort of result shows the usefulness of a test of this kind in differentiating between free-oil and total-oil content of a product.

In the tests reported in Table III, one food product is compared with another on the basis of weight of fat or oil absorbed by the packaging material under standard conditions. The

TABLE III—RESULTS OF FREE-FAT OR -OIL DETERMINATIONS ON VARIOUS FOOD PRODUCTS

Product	*Weight of sample (gm.)*	*Fat or oil content[a] (%)*	*Free fat or oil (mg./gm. of product) 30% R.H.* A	B	Avg.	*90% R.H.* A	B	Avg.	*Free fat at 90% R.H. / Free fat at 30% R.H.*
Potato chips[c]	43	37.1	39.4	40.8	*40.1*	64.5	54.5	59.5	1.49
Popcorn (popped)[c]	8	5.0	12.1	19.0	*15.5*	32.2	30.5	*31.4*	2.03
Salted peanuts (whole)	80	44.2	1.83	2.19	*2.02*	4.50	4.39	*4.44*	2.20
Shredded coconut									
Dry type	50	39.1	23.6	25.5	*24.5*	13.0	11.8	*12.4*	0.51
Moist type	50	28.6	5.90	8.63	*7.26*	12.0	10.5	*11.2*	1.54
Oatmeal cookie mix	100	—	8.90	7.48	*8.19*	31.2	30.1	*30.7*	3.75
Toll house cookie mix	100	—	16.5	15.2	*15.8*	29.0	25.6	*27.3*	1.73
Choc. fudge cake mix	100	—	—	—	*0.82*	—	—	*1.81*	2.21
Hot roll mix	100	—	—	—	*3.90*	—	—	*5.80*	1.49
Pie crust mix	85	42.8	—	—	*18.6*	—	—	*28.8*	1.55
Vanilla wafers[b]	70	—	—	—	*8.07*	—	—	*21.7*	2.69
Ground mace[e]	70	22.3	1.78	2.25	*2.02*	—	—	—	—
Ground Spanish paprika[d]	85	10.4	0.27	0.25	*0.26*	—	—	—	—
Ground cassia[e]	70	1.8	0.62	0.44	*0.53*	—	—	—	—
Ground black pepper[f]	70	8.4	0.27	1.02	*0.65*	—	—	—	—
Cayenne (pepper)[g]	57	20.2	—	—	*7.39*	—	—	*25.7*	3.48
Dried whole egg	50	42.0	—	—	*1.50*	—	—	*3.56*	2.37
Wheat germ	80	11.5[h]	1.25	1.28	*1.26*	3.04	2.30	*2.67*	2.12
								Avg.	2.08

[a] Based on typical literature values (4, 10, 11, 14, 16).
[b] Sample crumbled by hand.
[c] Siauw and Amboyna variety.
[d] Pimiento; orange-colored stain, almost entirely on inside of boxes.
[e] Honan variety.
[f] Malabar variety.
[g] Orange-colored stain both inside and outside boxes.
[h] On label.

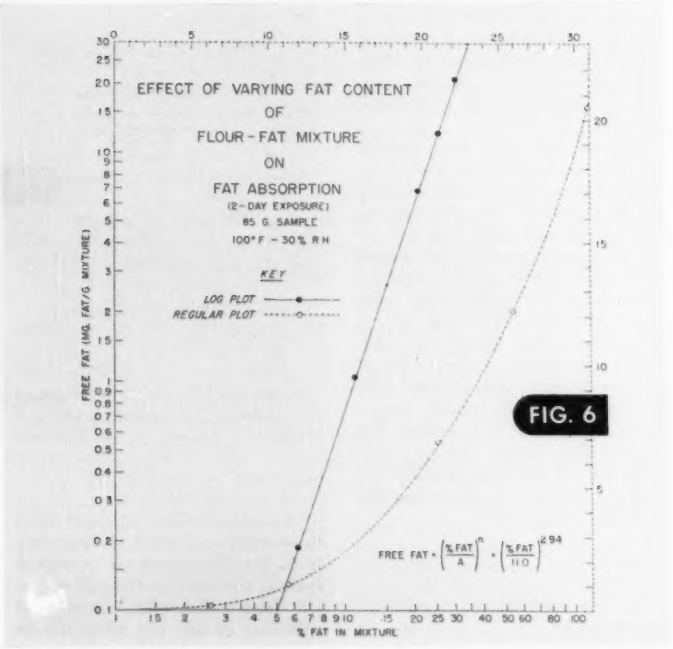


FIG. 6

results thus obtained are not strictly comparable, however, because the specific gravities of the fats extracted differed slightly. Most fats that might be encountered seem to have specific gravities ranging between 0.85 and 0.95. This difference in specific gravity would introduce a potential error in the comparisons of slightly more than 10%, which is certainly not serious.

It is hoped that eventually it will be possible to establish a definite relationship between free-oil values and a numerical system for rating greaseproofness, such as that used by Lavers (8) with turpentine. However, there is considerable opposition to the TAPPI turpentine test (13) and hence there may be little point in attempting to match values obtained by the TAPPI test with those obtained by the free-oil test.

Summary

Although the food industry is aware of the importance of free-oil measurements as an index of the ability of a food product to stain a package, a suitable quantitative test method for measuring free-oil has not previously been developed. Such a method is outlined in this paper.

A standard absorptive box is made for use under certain standard conditions. The oil or fat absorbed from a food product by this box is extracted with petroleum ether after the stain pattern is recorded. Results are expressed in terms of milligrams of free fat per gram of food product.

Data are presented for 18 different food products, including potato chips, popcorn, ready-mixes, crackers, peanuts, shredded coconut, dried whole egg, wheat germ and ground spices.

With these products it was found that the fat absorbed by the test boxes was, in general, about twice as much at high relative humidities (90%) as at low relative humidities (0 to 30%).

The relationship between free fat and total fat in a specially prepared food mixture of flour and fat was found to be exponential.

Acknowledgments

The authors wish to express their sincere appreciation to Professors Ernst A. Hauser, William C. Bauer and Henry Sherman, and to Messrs. Roger M. Stinchfield and Herbert V. Shuster, all of the Massachusetts Institute of Technology, and to Mr. Kenneth S. Rymal, late of the John E. Cain Co. and a former student in the Department of Food Technology at the Massachusetts Institute of Technology, for their willing assistance in the accomplishment of this study.

References

(1) Southwick, C. A. Jr., Packaging Characteristics of Products, MODERN PACKAGING, *20* (11), 147-48, 186, 188 (1947).

(2) Couch, R. de S. Testing Package Materials and Packages. *Modern Packaging Encyclopedia*, Packaging Catalog Corp., New York, 78 (1948).

(3) Grover, D. W., and Nicol, J. M. The Vapour Pressure of Glycerol Solutions at 20°. *J. Soc. Chem. Ind. (London), Trans.*, 59, 175-177 (1940).

(4) Jacobs, M. B. The Chemistry and Technology of Foods and Food Products, Vol. I, Interscience Publ., Inc., New York (1944).

(5) Landrock, A. H. Remarks at Seminar on Flexible Food Package Development, Packaging Institute 10th Annual Forum, New York, Oct. 15, 1948.

(6) Landrock, A. H., and Proctor, B. E. Measuring Humidity Equilibria. MODERN PACKAGING, *24* (6), 123-130, 186 (1951).

(7) Landrock, A. H., and Proctor, B. E. A Rapid Graphical Method for Measuring Humidity Equilibrium Data, with Special Reference to Its Role in Food Packaging Studies. *Food Tech.*, 5 (Aug., 1951). (In press.)

(8) Lavers, C. G. Grease Resistance. MODERN PACKAGING, *21* (7), 147-149 (1948).

(9) Rymal, K. S. A Determination of Free Oil Content in Food Products as Related to Packaging. S. B. Thesis, Mass. Inst. Tech. (1949).

(10) Strause, M. B. Pie Marches On. Patterson Pub. Co., Chicago (1939).

(11) Swanson, C. O. Wheat and Flour Quality. Burgess Pub. Co., Minn. (1938).

(12) Tech. Assn. Pulp & Paper Industry, New York. First TAPPI Testing Conference, Mellon Institute, Pittsburgh, Pa., Oct. 12, 1948.

(13) Tech. Assn. Pulp & Paper Industry, New York. TAPPI Test Procedure T 454 m-44, Turpentine Test for Grease Resistance of Paper (1944).

(14) Watt, B. K., and Merrill, A. L. Composition of Foods—Raw, Processed, Prepared. U. S. D. A. Agric. Handbook No. 8, Washington, D. C. (1950).

(15) Wilson, R. E. Humidity Control by Means of Sulfuric Acid Solutions, with Critical Compilation of Vapor Pressure Data. *J. Ind. Eng. Chem.*, *13*, 326-331 (1921).

(16) Winton, A. L., and Winton, K. B. The Structure and Composition of Foods, Vol. IV, J. Wiley & Sons, Inc., New York (1939).

New PI proposals

TWO TEST METHODS FOR SCREW-CAP LINERS ARE OFFERED BY INSTITUTE'S DRUG AND PHARMACEUTICAL COMMITTEE FOR TRIAL AND CRITICISM

The following two proposed test procedures, concerned with evaluation of liners for screw-cap closures, are being distributed to members of the Packaging Institute for trial and criticism. According to Dr. John C. Bird of Lederle Laboratories, chairman of the Institute's Drug and Pharmaceutical Committee which drew up the procedures, they will be reviewed after approximately one year of trial, after which the proposed test will either be revised and retested, or else be printed and issued as a Tentative Test Procedure.

PI CLOSURES 1P-51 (Proposed) *Test for Water-Vapor Transmission for Screw-Cap Closures.*

Purpose

This test is designed to measure the barrier efficiency of screw-cap liners against water-vapor transmission either into or outward from a glass container capped under standard conditions. It may be used to compare or screen new or existing closure-liner materials by their performance in a standard test. It also indicates whether the liner material in the closure will be satisfactory for moist products, dry products or both types of product.

The test method involves periodic weighing of containers to determine moisture gain or loss under standardized conditions.

Apparatus

1. Half-ounce bottles with 28-mm. GCMI finish. All test bottles are to be selected for uniformity of flatness of finish, width of lip surface and freedom from splits, chips or cracks.

2. Screw caps, 28-mm. CT of either plastic or metal.

3. Torque tester to determine application torque. Accurate to within ±½ in.-lb.

4. Humidity cabinet capable of control to ±1 deg. F. and ±2% relative humidity at 100 deg. F. Humidity ranges required are 25% R.H. and 75% R.H.

5. Balance for weighing the test bottles, accurate to 0.001 gr.

Closure-liner test specimen

The closure-liner test specimen must be die cut by either standard manufacturers screw-cap lining equipment or by a single punch, using care that the cut is made uniform and without distortion of the liner facing.

No torn liners or wrinkled liners are to be used. White virgin pulp backing is to be used for all tests. The liner-backing combination must be laminated together and adhered to the cap if plastic, or forced into the cap if metal, prior to use.

A minimum of 10 test specimens is required for this test.

Procedure A—weight loss

1. Tare each ½-oz., 28-mm. glass container together with their respective closures. A minimum of five containers is recommended.

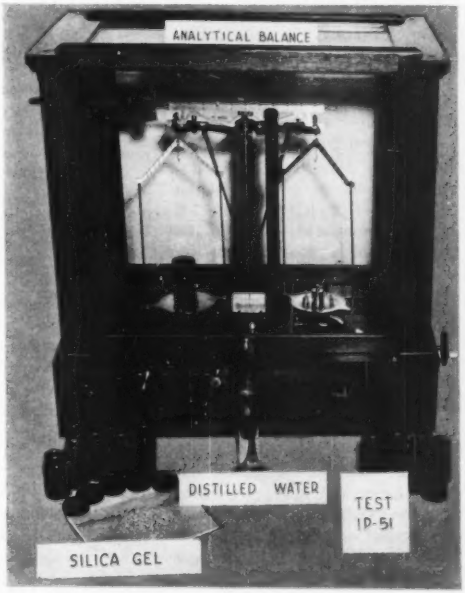
2. Place 10.00 cc. of distilled water in each tared glass container.

3. Apply the screw caps carrying the test liners with an application torque of 15 in.-lb.

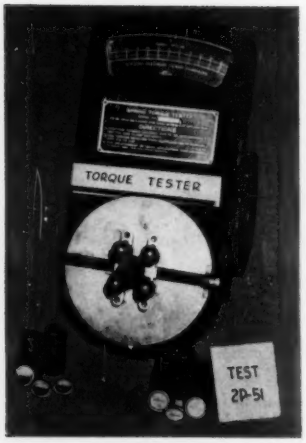
4. Place all containers upright in the humidity chamber at 100 deg. ±1 deg. F. and 25% ±2% relative humidity. Allow seven days for them to come to equilibrium.

5. Seven days after starting the test, begin weighing each test container at weekly intervals for four weeks. Keep the humidity cabinet at

PHOTOS COURTESY ELI LILLY CO



APPARATUS required for the 1P-51 test.



APPARATUS required for Test 2P-51.

constant conditions and replace test containers immediately after weighing. Weigh to nearest 0.001 gr.

6. Record the weight loss for each test container.

Procedure B—weight gain

1. Tare each ½-oz., 28-mm. glass container together with their respective closures.

A minimum of five containers is recommended.

2. Place 10.00 gr. of dry silica gel, calcium chloride or other suitable desiccant in each container.

3. Apply the screw caps carrying the test specimen with an application torque of 15 in.-lb.

4. Place containers upright in humidity chamber at 100 deg. ±1 deg. F. and 75% ±2% relative humidity. Allow seven days for them to come to equilibrium.

5. Seven days after starting the test begin weighing each test container at weekly intervals for four weeks.

Maintain the humidity cabinet at constant conditions and replace test containers immediately after weighing. Weigh to nearest 0.001 gr.

6. Record weight gain for each test container.

Report

Report both the individual and average losses and gains of moisture in the four-week test period for each liner material undergoing test.

These figures give a barrier performance record for the test material against water-vapor transmission either into or out of the test container.

Interpretation

This test will be useful to screen new closure-liner materials not previously used. It will indicate whether closure liners are satisfactory for moist or dry products, or for both.

This test establishes a procedure whereby new and existing closure-liner materials may be rated as to their relative performance by a uniform test method.

Reproducibility

This test gives reproducible results.

PI CLOSURES 2P-51 (Proposed) *Screw-Cap Liner Test for Determining Compatibility With a Specific Product.*

Purpose

This test is to determine the suitability of a lining material in a screw-cap closure for use with a specific product in a glass container. It is a standardized method of ascertaining corrosion, discoloration, distortion, adhesion to bottle lip, disintegration, ballooning, softening, edge leaks, penetration, delamination, leakage and the like. The test is also designed to reveal physical or chemical changes in the product itself, such as color change, precipitation, significant evaporation, etc.

Apparatus

1. Half-ounce bottles, 28-mm. GCMI finish. All test bottles are to be selected for uniformity of flatness of finish, width of lip surface and freedom from splits, chips or cracks.

2. Screw caps, 28-mm. CT of either plastic or metal.

3. Torque tester to determine application torque. Accurate to within ±¼ in.-lb.

4. Refrigerated storage.

5. Humidity cabinet capable of operating at 100 deg. F. ±1 deg. F. at 75% relative humidity.

6. Oven capable of operating at 100 deg. F. ±1 deg. F.

Test specimen

The closure-liner test specimen must be die cut by either standard manufacturers screw-cap lining equipment or by a single punch, using care that the cut is made uniform and without distortion of the liner facing. No torn or wrinkled liners are to be used. White virgin pulp backing is to be used for all tests. The liner-backing combination must be laminated together and adhered to the cap if plastic, or forced into the cap if metal, prior to use. Sufficient test samples are to be prepared so that after inspection of caps no sample need be continued on test.

Procedure A— Preliminary compatibility test

The first test is a preliminary compatibility test and should run for 30 days under the following conditions:

(a) Room temperature,

(b) 100 deg. F. with uncontrolled humidity,

(c) 100 deg. F. at 75% relative humidity and

(d) Refrigerator storage where indicated.

A minimum of five bottles is to be used for each test condition.

1. Fill the test bottles half full with the product the compatibility of which with the closure liner is to be tested.

2. Place bottles on their sides during the test so that one-half the liner area is in contact with the liquid product and one-half is in contact with the vapor phase present. Hold bottles in constant position.

3. Examine as directed below under Examination of Tests.

Procedure B— Long-time compatibility test

1. Proceed as under A except that the test shall continue for six months with examinations at 30, 60, 90 days and at six months. At the end of six months discontinue the 100 deg. F. storage tests, for they represent accelerated conditions.

2. Examine as directed under Examination of Tests.

Procedure C— Long-time product stability test

Continue the storage test at room temperature for one year to determine the product stability in contact with the closure liner.

Examination of tests

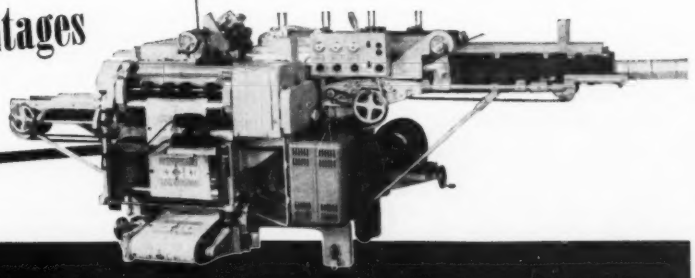
At the conclusion of 1, 2, 3, 6 and 12 months, sample screw caps should be removed and inspected for all defects such as corrosion, discoloration of product as well as liner distortion, adhesion to bottle lip, disintegration, ballooning, softening, edge leaks,

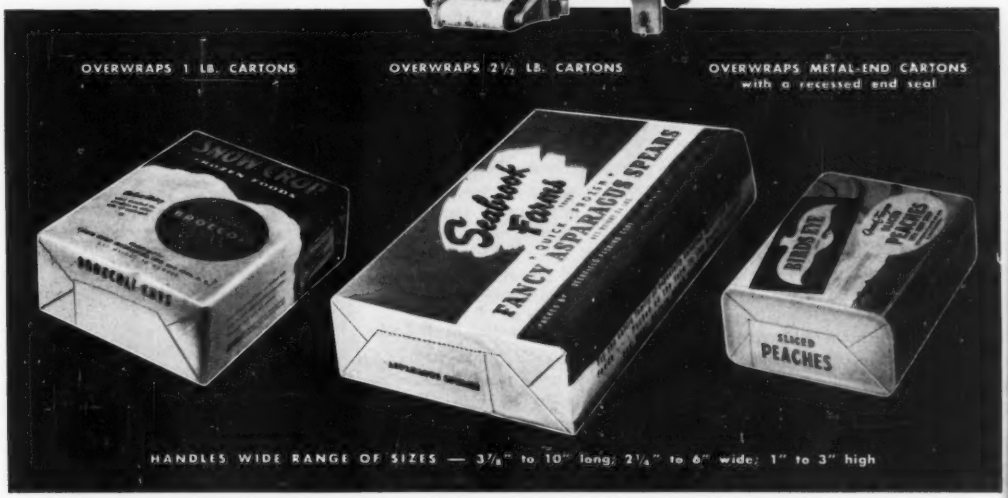
(This article continued on page 172)

check these important new advantages

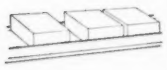
OF THE IMPROVED

BATTLE CREEK MODEL 46 WRAPPING MACHINE

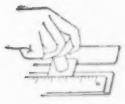



OVERWRAPS 1 LB. CARTONS
OVERWRAPS 2½ LB. CARTONS
OVERWRAPS METAL-END CARTONS with a recessed end seal
Seabrook Farms
FANCY ASPARAGUS SPEARS
SLICED PEACHES
HANDLES WIDE RANGE OF SIZES — 3⅞" to 10" long; 2¼" to 6" wide; 1" to 3" high

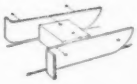
THESE NEW FEATURES PLUS SPEEDS UP TO 100 PER MINUTE CUT YOUR COSTS



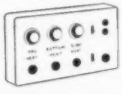
1. AUTOMATIC CONTROLS handle intermittent flow of packages without need of operator. The Model 46 may be synchronized with other packaging operations by conveyors, and each package moving into the machine automatically unlocks its own sheet of paper, when in position for wrapping.



2. CALIBRATED ADJUSTMENTS allow quick changeovers from one package size to another. Only 5 to 10 minutes are required to change the Model 46 from one size package to another. Simple-to-use calibrated adjustments may be charted for future reference . . . save time in future set ups.



3. BREATHING FOLDERS take care of package variations . . . give a neat "show case" look to finished package. Bulges and slight irregularities in packages are easily handled by "breathing folders" to provide a neat, tight seal . . . eliminate shutdowns . . . achieve steady production . . . handle recessed end cans.



4. THERMOSTATIC HEAT controls handle the latest heat-seal papers. Improved, centralized thermostatic heat control panel with fingertip adjustments permits pre-heating of paper while it is being folded. Result? A tighter, more durable seal.

Continuous Flow PACKAGING

GIVES THE GREEN LIGHT TO PACKAGING PRODUCTION

BATTLE CREEK BREAD WRAPPING MACHINE COMPANY

BATTLE CREEK, MICHIGAN

Questions & Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Printing affects cellophane

QUESTION: One of our new products is in a moistureproof cellophane envelope. Our field tests were made with a printed paper label inside the envelope. When we went to an overall printed envelope it appeared to us that the product was caking much faster than in the previous package. Since we are using the same grade of cellophane we can't understand why this is happening.

ANSWER: The printing of moistureproof cellophane reduces the moistureproofness of the sheet and the amount of such reduction depends upon the area of the printing. If your envelope carries a large amount of ink coverage, you have in effect greatly reduced the moistureproofness of the exterior surface. In your case, this reduction is sufficient to cause caking of the product. You can overcome this difficulty by using a duplex cellophane bag, the exterior ply printed, or by using a single-ply unprinted cellophane with a paper label attached to the bag by heat sealing. Either one of these packages should have the moistureproofness that you apparently require for this product.

Transparent protective container

QUESTION: We wish to package a humidity-responsive element in a humidity-sealed container. We must maintain the humidity inside the package not over 10% relative humidity over 70 deg. F. and the time of storage is at least 18 months under severe conditions. We would like to use a rigid transparent plastic container for this purpose and would like to know if such containers would provide the protection we require.

ANSWER: Rigid transparent plastic containers are usually made from either polystyrene or cellulose acetate and neither of these materials would provide sufficient moistureproofness for the conditions which you have outlined. It would be doubtful if sufficient moistureproofness could be obtained by applying moistureproof coatings to such containers and such a process would be complicated to perform. It would also result in a complex and expensive assembly if you should attempt to use exterior film wrapping sufficient to give the protection you require. The best and simplest answer to your problem would be to use a glass jar or large-sized vial with a foil-lined screw cap. Such a package could be protected against breakage by enclosing it in a screw-type fibre can with a cushioning material. Glass would eas ly meet your needs and provide a package of relatively simple construction.

Polyethylene-coated kraft sacks

QUESTION: I have noticed that polyethylene is being used in multiwall shipping sacks in place of asphalt-laminated kraft. However, the polyethylene is placed on the inside of the sack against the product, while the asphalt sheet is always nearer the outer plies. Would not the polyethylene barrier be more effective if placed nearest the outside surface, rather than on the inside?

ANSWER: There are several reasons why the polyethylene-coated kraft is placed in such a way that the polyethylene is against the product. One reason is that many granular products can abrade the surface of the kraft, with the result that paper fibres become contaminated with the product. With the polyethylene surface on the inside, this abrasion is not so apt to occur. Also, many chemical products, if they absorb some moisture, can react with paper to cause severe loss of strength. The polyethylene surface against the product prevents any interaction between the bag and the product. The polyethylene layer is just as effective a moisture barrier when placed on the inside as it would be if placed on the outside surface of the sack. Polyethylene has many other advantages over the asphalt sheet in that it does not become brittle at low temperatures, does not stain the paper if exposed to elevated temperatures and also is not affected by or does not cause staining if there is any oily portion in the product.

Export pack for steel sheets

QUESTION: We are interested in finding a large-sized metal container suitable for the shipping of steel sheets for export. We would like to have details of how the seams and other constructional details should be made so that the container would protect the steel and prevent corrosion for long-time storage.

ANSWER: There are no standard sizes of prefabricated metal containers of the size you would require for the shipment of steel sheets. It would be necessary for you to have such containers fabricated to your specifications and in all probability such containers will have to be made by a welding of the joints and seams because it will not be possible to use can-making equipment for the size and weight of metal that you will require. It is possible that you could use Method II packaging for the preservation of your product. Such a package would consist of a heat sealed, flexible, strong, moistureproof barrier in which a desiccating agent such as silica gel would be used to dehydrate the interior and prevent corrosion. This method has been successful in the overseas shipment of war materiel and there is no reason why it should not be used for your product. It is suggested that you obtain copies of several of the military specifications covering this type of packing. It will be necessary for you to enclose the Method II barrier in a wooden box of some type which would protect the barrier and prevent it from being abraded in shipment.

Add the flavor of sales appeal to your package . . .

seal with

Cel-O-Seal

REG. U. S. PAT. OFF.

In today's markets where the shopper often serves herself, it's especially important for your package to *sell itself.* Bright, colorful, "Cel-O-Seal" bands add just the extra sales appeal that can make so much difference in impulse buying. They flag the customer's attention . . . tell her your product has been protected against tampering and contamination. And, too, they can get your trade-name, or sales message, across to the customer.

John Sexton & Company put brilliant "Cel-O-Seal" bands to work for them when they decided to enter the retail market. They made the most of their brand name, familiar to millions of restaurant, hotel and club diners, by putting it on "Cel-O-Seal" bands where retail shoppers could see it . . . and easily recognize it. Also the colorful "Cel-O-Seal" bands gave the John Sexton Company the opportunity of taking full advantage of the store manager's tendency to give priority display to attractive packages.

And you can make your product stand out on the shelf with these eye-catching "Cel-O-Seal" bands, too. They're available in over 20 colors and countless color combinations . . . either plain or printed. We'll be glad to help you design a "Cel-O-Seal" band that will do the most effective selling job for your package. Just write "Cel-O-Seal" Sales Division, E. I. du Pont de Nemours & Co. (Inc.), 9521-A Nemours Building, Wilmington 98, Delaware. "Cel-O-Seal" cellulose bands are also sold by Armstrong Cork Co., Lancaster, Pa., and I. F. Schnier Co., San Francisco, Cal.

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

DU PONT "CEL-O-SEAL" BANDS

Rayco

DAY-GLO® Fluorescent FLOCK

By arrangement with Switzer Brothers, Inc.

A really *NEW* idea to make your package stand out

Write for color samples and source of supply for DAY-GLO Flocked paper.

Please direct all inquiries concerning DAY-GLO FLOCK to

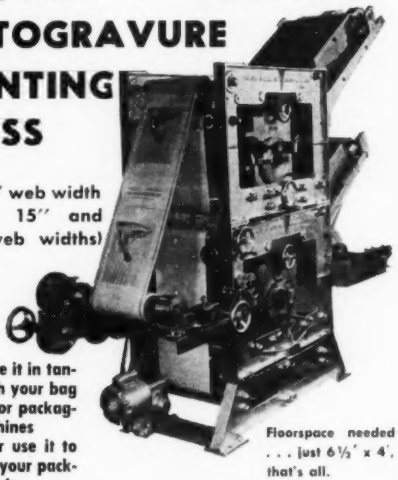
Rayon Processing Co. of R. I., Inc.

PIONEER PRODUCERS OF SURFACE-COATING FLOCKS

110 Moshassuck St. Pawtucket R. I.

Inexpensive... **MINIATURE ROTOGRAVURE PRINTING PRESS**

...10" web width (also 15" and 20" web widths)



...Use it in tandem with your bag making or packaging machines ...or use it to preprint your packaging webs.

Floorspace needed ...just 6½' x 4', that's all.

This is KILB's Two Color Miniature Rotogravure Press. It consists of two Single Color Units, mounted one above the other. Includes dryers and unwind and rewind mechanisms. This is our latest design Two Color model that sells for only $2933.00 complete (less motors). Write for literature and prices.

FRANCIS C. KILB CO.

Manufacturers of Miniature Rotogravure and Aniline Multi Color Web Presses

140 E. Second St. Garden City 7-7191 Mineola, L. I., N. Y.

BAG PRODUCTS...

Send Today for Bulletin No. 8-29

Easy to Use..Low in Cost

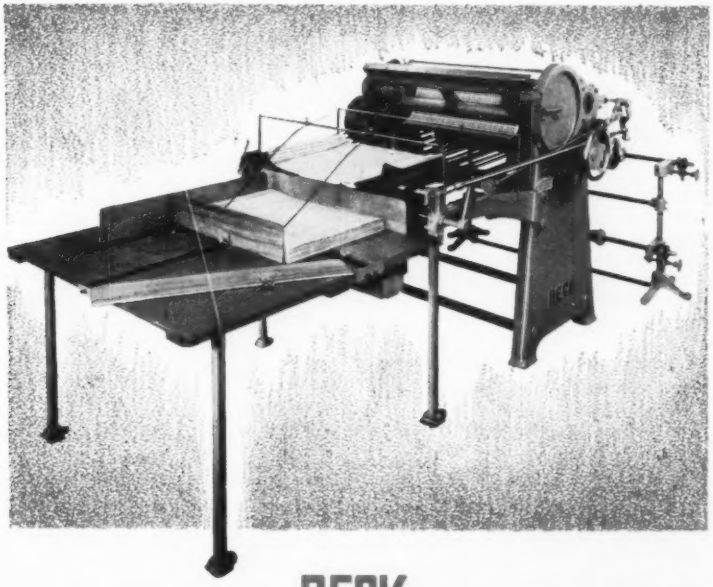
Designed to handle bagged products with a minimum of effort at a maximum speed. Simple adjustments for height... tilting forward or backward enables operator to set machine at easiest position. Stainless steel trough with capacity of 200 bags. Adjustable to bag sizes. Blower keeps bag clean and free from foreign matter.

Anderson BROS. MFG. CO.

ANDERSON BROS. MFG. CO., ROCKFORD, ILLINOIS

EVER THINK OF DOING YOUR OWN SHEETING?

It's the *cheapest* way to get sheets! Sheets of anything from cellophane to light board . . . any number of any size sheets as fast as you need 'em. Chances are you don't realize how little a BECK AUTOMATIC ROLL SHEET CUTTER costs . . . or that savings on cutting charges often pay back a SHEETER'S price in months. Get the facts! You'll probably save . . . you can't lose by asking for your SHEETER Catalog.



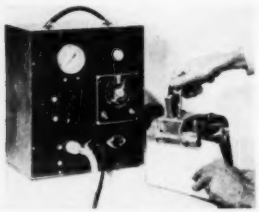
CHARLES BECK MACHINE CORPORATION

406 NORTH 13th STREET BECK PHILADELPHIA 8 PENNA.

Equipment and materials

A DE LUXE PORTABLE HEAT SEALER

especially designed for heat sealing all thermoplastic coated and laminated packaging materials is being offered by Packaging Industries, Ltd., Inc., 50 Church St., Montclair, N.J. Known as the Model 6A, it weighs only 3½ lbs. and provides positive pneumatic pressure at the jaws, adjustable from 10 to 80 lbs. Jaw pressure is obtained by an in-built air cylinder. Dwell time is also automatically and positively controlled, adjustable in any fractions of a second up to 15 seconds. Temperature is thermostatically controlled at a range of from 250 to 500 deg. F. In operation, the operator positions the material to be sealed and trips a trigger in the hand grip. All functions of the sealer then take place automatically. When the three controlling elements are properly set, all operations are constant. The unit will seal foil and other barrier materials, over splices and wrinkles, through contamination and without delamination, according to the manufacturer.



A NEW BUTTRESS TYPE OF THREAD

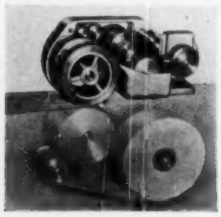
designed especially for Plaxpak polyethylene bottles has been developed by the Plax Corp., Hartford, Conn. The new thread, called Plax Buttress Thread, supplements standard glass-container types and is said to permit a stronger juncture between cap and bottle. In addition, it enables the cap to be removed and loosened more easily. While glass-container threads are round, the Plax thread is V-shaped. The driving face is perpendicular to the neck of the bottle, while the back face makes an angle with the neck. Efficiency in the transmission of strength and power between cap and bottle is thus achieved, according to the company.

POLYETHYLENE BARREL AND CARTON LINERS

with "Hydro-fused" seals are now being produced by Better Bags, Inc., 840 N. Sixth St., Philadelphia. The company has developed this special process of keeping the seal and adjoining material water cooled as the seal is being made, which is said to prevent a breakdown of the virgin material adjacent to the seal.

A SIMPLE NEW PRECISION MARKER

that automatically applies designs and printed matter on material in sheet or strip form has been announced by the American Marking Corp., 385 Hillside Ave., Hillside, N.J. Imprints up to 9 in. wide and 24 in. long may be continuous or repeated at set intervals either while the material is being processed or as part of a packaging operation. The new unit, called American Major, is also available in special models with type rollers ranging up to 36 in. circumference and 18 in. wide. All operating parts are mounted on one side of the frame to permit quick servicing without tools. Manual pressure adjustment between rolls can be made without stopping the machine. Positive gear drive is said to assure synchronous operation of all rolls and ink creep on metering roll is controlled by replaceable rubber squeegees. All shafts are mounted on sealed ball bearings. The engraved, hard-chrome plated metering roll is said to meter ink precisely and to resist wear.

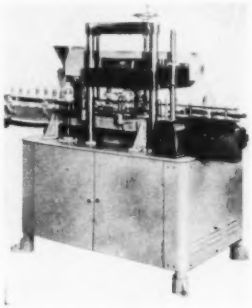


THREE NEW PRINTED-TAPE LINES

have been added to those already being produced by the Labeltape Co., Ruxton, Md., to meet the demand of industrial users of pressure-sensitive adhesive tapes for identifying parts and completed units. Supplementing the company's cellophane and acetate fibre tapes are (1) a paper tape for use when information is to be written on labels as applied, (2) a cloth tape said to have high strength and waterproofness and (3) a new laminated cellulose tape called Labeltex which is said to be very rugged, have great tensile strength and resistance to moisture, heat or cold. The tapes are sold through established wholesalers.

VERSATILE NEW AUTOMATIC LABELER

with a production capacity of 75 labels per min. has been added to the packaging-machinery line manufactured by the MRM Co., Inc., 191 Berry St., Brooklyn 11, N.Y. The labeler is designed to accommodate a wide range of container sizes and styles from fractional ounces to gallons by means of a special vertical adjustment control which also prevents round containers from spinning. It is claimed that the labeler will affix paper or metal foil labels securely to any type of container such as paperboard, tin, plastic, metal or glass. Size of labels which can be applied successfully may be as small as a postage stamp up to 5 in. wide by 6 in. high. One of the features of the labeler is the process of applying adhesive. The adhesive is applied away from the edges so that when the wipers come in contact with the label it will be spread evenly without oozing beyond the edge. Models are available for front and back labeling as well as a duplex style which handles up to 150 containers per minute, according to the manufacturer.



INSERTS FOR HOSIERY PACKAGING

developed by the Packaging Div., E. W. Twitchell, Inc., 2801 N. Third St., Philadelphia 33, Pa., are designed to meet the supermarket need for a stiffener which cannot be folded and, therefore, cannot be easily pilfered. These heavy-weight hosiery stiffeners come in 6¾ by 9¼, 6¾ by 9¾ and 6¾ by 9½ sizes, all with rounded corners. In addition to the inserts, the company is also offering Pliofilm hosiery envelopes. It is claimed that their high resistance to handling reduces the number of packages returned to the mill by the outlet, materially cutting repackaging costs. The envelopes are supplied with a bottom

Candy and Cake

become glamorous gifts in handsome rigid containers

made of

STYRON

Make sure the foods you send to market reach the counters at their delicious best . . . and show off their tempting goodness to best advantage. Send them to market in handsome rigid containers made of STYRON (Dow polystyrene) and not only are their freshness and sales appeal assured . . . they're turned into glamorous gift items!

You'll appreciate the economy, light weight and sturdiness that mean lower production cost per unit, reduced shipping costs, less breakage and sure food protection. And your customers will be quick to recognize the re-use value of rigid containers made of STYRON . . . they'll reach for them every time!

Add up the advantages . . . then picture *your* product in gem-like transparent or opaque rigid containers made of STYRON. Qualified molders will meet your specific packaging requirements . . . or you may choose from the wide range of low-cost standard sizes and shapes. Get ready for holiday business . . . write to Dow today for detailed information.

Plastics Division • Packaging Section PL 146

THE DOW CHEMICAL COMPANY

MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington
Atlanta • Cleveland • Detroit • Chicago • St. Louis
Houston • Los Angeles • San Francisco • Seattle
Dow Chemical of Canada, Limited, Toronto, Canada

FRUIT CAKE BOX: *Attractively designed lid is sturdily constructed and tight fitting to protect quality and flavor of contents. Transparent lid exposes only tempting goodness of the fruit cake.*

CANDY BOX: *A thousand and one re-uses for this crystal clear candy box! Hinged lid is tight fitting, stays open or shut.*

The Dow Chemical Company
Plastics Division, Packaging Section
Midland, Michigan

Please send me your latest packaging catalog featuring RIGID CONTAINERS MADE OF STYRON.

Name_____

Company_____

Street_____

City_____ State_____

Product to be packaged_____

DOW plastics

...for

Preferred Packages

Here's a way to achieve

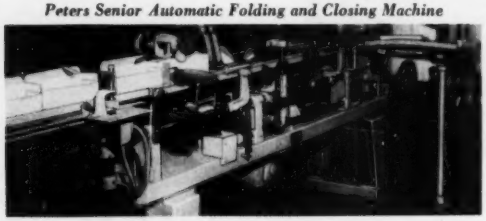
Appealing, Satisfying Results

Have you heard of the prize-winning package design that fizzled out on store shelves because the carton didn't hold together properly? That may happen to other good cartons too. It proves that carton construction is just as important as design. . . . There is a way to make sure your cartons retain their shape as well as their shelf appeal.

PETERS WAY Proves Its Value

When you use the Peters-style cartons with Peters Packaging Machinery, cause for concern over damaged or sloppy cartons is ended. Secure, interlocking design and highly efficient forming, lining, folding and closing operations assure long life with good appearance. Peters Machinery for specialized jobs in the bakery, food, meat and other industries is also available. . . . Investigate the PETERS WAY with Peters Machinery now.

Peters Senior Automatic Folding and Closing Machine



Send a sample of your carton, and tell us your problem or requirements. Find out what the PETERS WAY can do for you—without cost or obligation.

Peters MACHINERY CO.

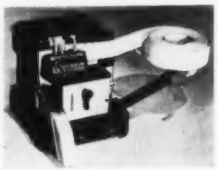
4712 Ravenswood Avenue Chicago 40, Illinois

Equipment and materials

opening to permit the hosiery to be placed on a rack and, with the heavy stiffeners, will stand indefinitely with the transfer showing through the window. A special method of folding is said to prevent hosiery from sliding in this upright position.

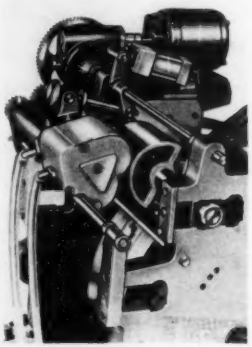
AN IMPROVED IMPRINTER AND MARKER

with a new device for automatic consecutive or duplicate numbering, or with a hand-set wheel for quick changing of data is now available from the Soabar Co., 5815 Erdrick St., Philadelphia. The machine is adjustable to a wide range of sizes and types of tickets, tags and labels. It can be set to print a predetermined number of labels. Average production speed is said to be 150 tickets per min.



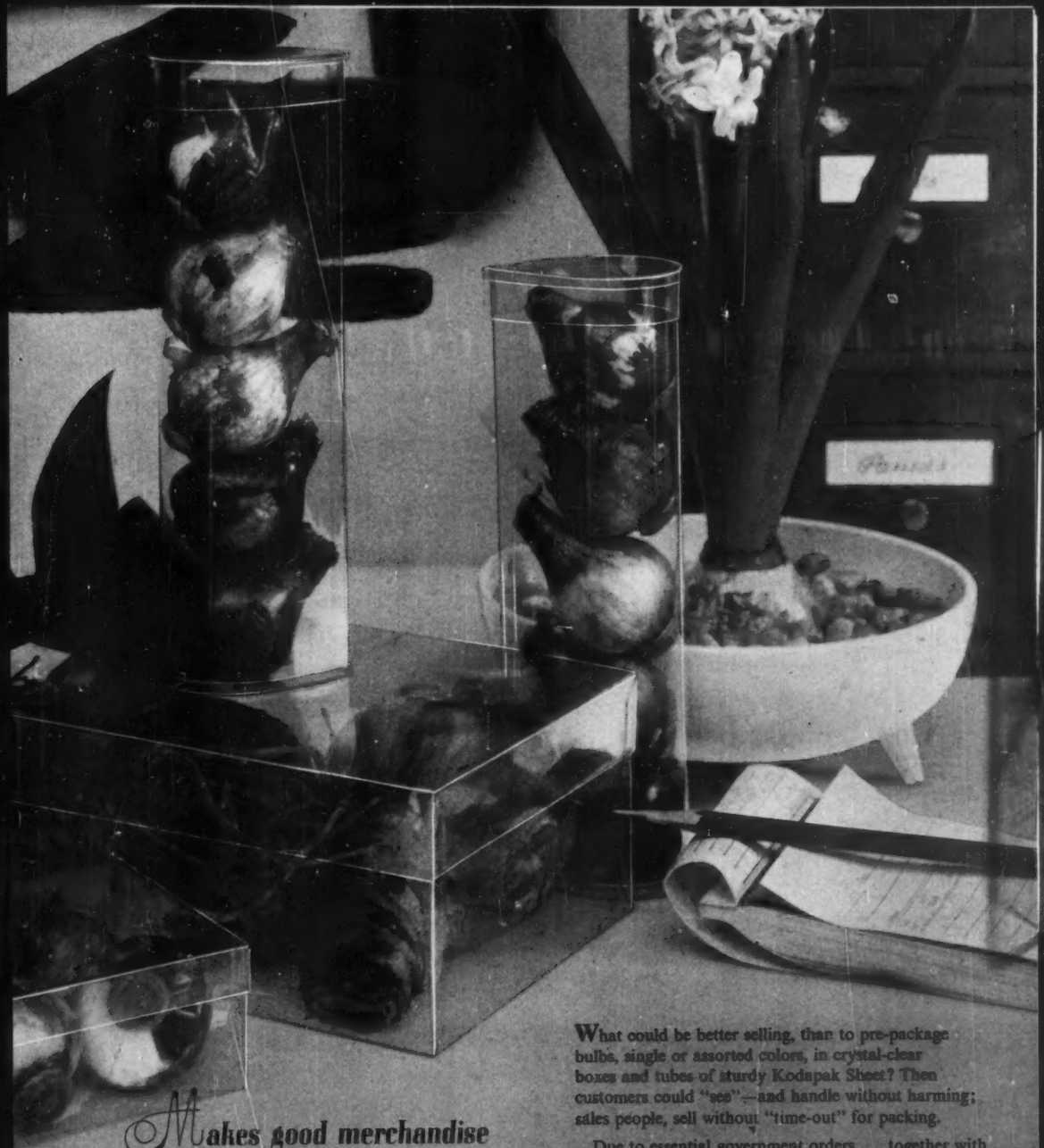
A NEWLY DEVELOPED PASTE APPLICATOR

that replaces bag-machine bottom paste pots, or paste pots on any machinery where adhesive application is required, is now available from H. G. Weber & Co., Inc., Kiel, Wis. It is said to maintain a constant flow of heavy viscous paste to the applicator roller by a pumping arrangement that eliminates the usual type of paste pot that must be filled manually. The entire application unit and pump arrangement is coupled directly to the machine by a gear drive. It consists of a simple arrangement for transferring viscous or semi-liquid adhesives by a plunger-type pump, located in a container, to a small reservoir mounted on the machine in which the application roller rotates to pick up the paste for distribution to a pick-off roll, or sector, that acts as an agent to transfer the adhesive from the applicator roll to the paper bag bottom. After even distribution is made, excess adhesive pumped to the reservoir on the machine is returned to the pump and container. The Weber paste applicator may be used with modifications on carton and envelope machinery, gluers and labelers. Should the machine be shut down for a brief period, an automatic arrangement circulates the adhesive from the pump through the applicator reservoir to prevent the paste from drying or lumping.



A NEW ECONOMICAL OVERHEAD CONVEYER

known as the "Econ-O-Veyor" is said to employ a new construction having trolleys with two vertical wheels and a single horizontal wheel, with successive trolleys connected together by a heavy roller chain. The track consists of two "T" sections running side by side with a vertical trolley wheel carried by each "T" section and the horizontal wheel running between the sections. On turns a third "T" section is placed above the outside "T" section and the chain pull is distributed almost equally between the three wheels. This is claimed to prolong the life of the wheels and give full rolling contact at all points without the use of the usual traction wheels or roller turns. Chain pull is in line with the vertical wheels so that the chain



Makes good merchandise sell better . . .

Kodapak Sheet

"Kodapak" is a trade-mark

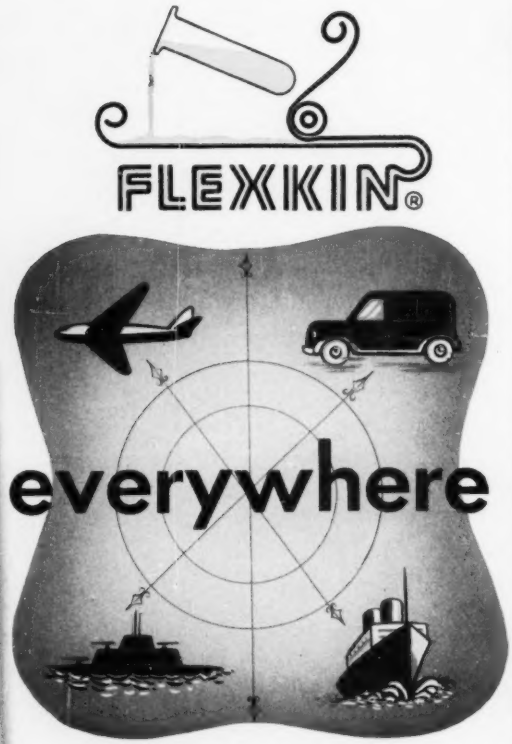
Bulbs: courtesy of Max Schling Seedsmen, Inc.

What could be better selling, than to pre-package bulbs, single or assorted colors, in crystal-clear boxes and tubes of sturdy Kodapak Sheet? Then customers could "see"—and handle without harming; sales people, sell without "time-out" for packing.

Due to essential government orders . . . together with critical shortages of basic materials, current supply of Kodapak Sheet is necessarily limited. In your planning please consult your local representative or write

Cellulose Products Division
Eastman Kodak Company, Rochester 4, N.Y.

Sales offices in New York, Chicago, Dallas, Pacific Coast distributor: Wilson & Geo. Meyer & Co., San Francisco, Los Angeles, Portland, Seattle. Canadian distributor: Paper Sales Limited, Toronto, Montreal.



In all elements, all climates, for all purposes . . . FLEXKIN is *the* Moisture Vapor Barrier of highest rating for everything from aircraft engines to G. I. rations.

Get the benefit of our wide experience and specialized technical know-how* in laminating foils and films on scrim and paper. Consultations without obligation.

FLEXKIN AL-59

MIL-B-131A Classes A & B
JAN-P-131, Amend. 3
Type I—Classes A & B
All applications including
MIL-C-6056 & MIL-E-6060
AN-B-20 Type II
Wright Field for Air Force Airplane Engine Envelopes

FLEXKIN AL-611

JAN-P-131, Amendment 3 Type I—Classes B & D

FLEXKIN AL-29

JAN-P-131, Amend. 3 Type I—Class B
AN-B-20 Type II
All applications including
AN-C-67b & AN-E-1B
Wright Field for Air Force Airplane Engine Envelopes

FLEXKIN AL-111

JAN-P-131, Amendment 3 Type I—Class B AN-B-20 Type II
All applications under AN-C-67b

FLEXKIN AL-211

for Q.M. Food & Container Institute 5-in-1 Ration Pack

FLEXKIN AL-52 Class D

Data on construction, put-up, physical characteristics, and uses obtainable upon application.

ACME BACKING CORPORATION
BROOKLYN 6, N.Y.

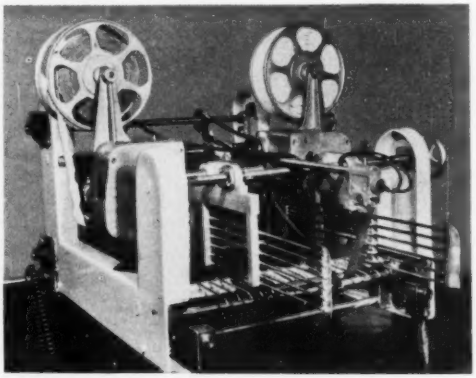
*Army-Navy "E" awarded for World War II service work.

Equipment and materials

does not have a tendency to rock the trolleys. This makes for an extremely low chain pull and resultant low power consumption, according to the manufacturer of the unit, Shuler Conveyors, Inc., 43 Hutcheson Place, Lynbrook, N.Y. The trolleys are on 12-in. centers and are connected by a chain, which makes it possible to hang the load every 12 in. or multiples thereof. The extreme flexibility of the "Econ-O-Veyor" is said to make it applicable to almost any job and prompt deliveries are reported by the manufacturer.

AN ADAPTABLE END LABELER

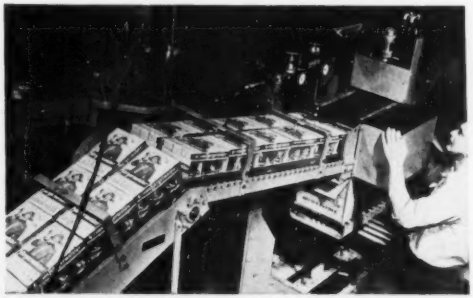
for use in conjunction with wrapping machines enables bakers to take advantage of the improvement in packaging and better advertising when end labels are used. Manufactured by



Lanham Machinery & Service Co., 746 Stewart Ave., S. W., Atlanta, Ga., the machine applies labels to wax or cellophane with positive positioning. The labels are preheated before they are applied, to assure an excellent bond. The machine is said to be sturdy and easily adjustable. Code daters for attachment to the labeler on one or both sides are available.

A NEW CARTON-CASING MACHINE

specially developed for "View Pack" display cartons used for multiple-unit packaging of canned products completes the line of automatic equipment designed to handle the cartons. De-

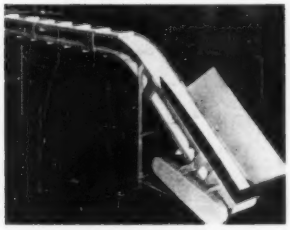


signed and produced by King Sales & Engineering, Inc., San Francisco, Calif., the caser accumulates the cartons in double

rows without scuffing their printed surfaces and then cases a complete tier at a time to prevent tearing glue flaps. Automatic safety devices align each group of four cartons before they are dropped simultaneously into the shipping case. Another device automatically lowers the case to permit filling of the second tier. The model illustrated was made to case eight cartons of San Francisco Brewing Corp.'s Burgermeister beer. Similar units are available for other applications, it is reported.

CONVEYORS ESPECIALLY ADAPTED TO PACKAGING

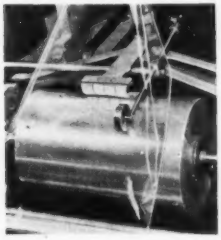
operations are available from the Klaas Machine & Mfg. Co. 4329 E. 49th St. Cleveland 25, Ohio. The conveyor can be placed for example at the dispensing end of a packaging machine transporting packages to the place where the boxing operation is performed. Belt of the conveyor is of woven fabric, which is easy to maintain. The lugs are of washable canvas. Framework is of light structural steel and a ¾ h.p. motor is the driving means. Flexible design of the conveyor permits variations in lengths and other respects as required by the products to be conveyed. Speed can be adjusted by changing sprockets on the motor. A variable speed drive can be incorporated if desired.



A PAPER-CUTTING RACK

designed for high-production paper-slitting equipment in shipping and packing departments has recently been developed by the Unistrut Products Co., 1013 W. Washington Blvd., Chicago 7, in conjunction with several large paper manufacturers. It is designed to support two rolls of heavy or multi-cushioned paper and a special tool cuts the paper by a slitting action across the roll instead of by the conventional blade method.

A NEW PERFORATING DEVICE ATTACHMENT



for wrapping or bag-making equipment which has been developed for use on cellophane and other films is manufactured by Modern Machinists Co., 774 Girard St., N.W., Washington, D.C.

The device consists of a shaft mounted on a suitable bracket to which is attached a small rotary head with several replaceable perforating units. The perforator is turned by the rotation of the roll of wrapping material. It is said to be inexpensive, easily used and does not destroy the strength or moistureproofness of the wrapping material.

A NEW TWO-SPEED PRESSURE-TAPE DISPENSER

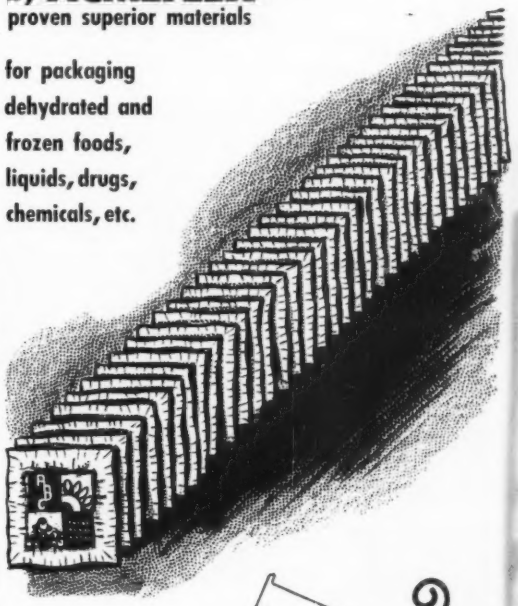
for measuring lengths of all types of industrial pressure-sensitive tapes in widths up to 2 in. is being offered by Better Packages, Inc., Shelton, Conn. Designed for production-line operations, it is said to have a long, easy-to-pull feed crank. An extra set of change gears gives choice of long (10-in. per stroke) or short strip feeding. Its two-column measuring scale gives length settings without resorting to wasteful trial-and-error methods. This new Big Inch #20 dispenser, which handles rolls on standard 3- to 8-in. diameters, has a patented dispensing principle which the manufacturer claims will avoid the extreme curling that is a problem with certain tapes.

from the first to the millionth-

they're perfectly protected by* ACMEFLEX

proven superior materials

for packaging dehydrated and frozen foods, liquids, drugs, chemicals, etc.



ACMEFLEX®

ENGINEERED for AUTOMATIC PACKAGING

ACMEFLEX properties: Hermetic heat sealing. Extremely low moisture vapor transfer. Inexpensive. Printable. Inert, non-toxic. Protection against light, loss of flavor, contamination. Sterilizable after packaging. Odorless and tasteless. Very high ratio of seam and body strength to weight.

ACME BACKING CORPORATION
BROOKLYN 6, N.Y.

Better Aniline Printing

by incorporating shellac in your aniline inks

By formulating aniline printing inks with Mantrose Quality shellac you can obtain the following characteristics:

Better adhesion — Improves the retention of pigment by film, foil and paper. Increases scuff and scratch resistance.

Better gloss — Adds a pleasing soft lustre to printed areas.

Better coverage — Insures uniform appearance of large flat areas.

Better finish — Provides a hard, non-tacky, non-smearing surface when dry.

#65 refined extra white bleached shellac. For clear or transparent inks. Contains no wax.

Bone dry bleached white shellac. For best printing of heavy, even, opaque solids.

Mantrose maintains a complete laboratory to develop a shellac that meets your requirements.

SEND FOR SAMPLES. A sample of the above grades will be sent upon inquiry on your business letterhead.

The MANTROSE CORPORATION

Importers • Bleachers • Manufacturers
136-146 Forty-first Street
Brooklyn 32, N. Y.

Quality SHELLAC

Packaging An Ounce of Powder, Crystals, or Small Nails? Brown Bag Packeting Equipment handles every filling requirement for dry, free flowing products in quantities from ounce fractions to two ounces; and includes packet filling machines, Seed Packeting Machines, Heat Sealers, and Automatic Filling and Sealing Machines with attachment for small nails and screws. Filling and sealing speeds up to 24,000 packets per day. Send for complete machine and packet details.

Powder Machine

Do Your Sales Up "BROWN"!

Double Drum Automatic Filling and Sealing Machine

BROWN

BAG FILLING MACHINE CO., INC., Fitchburg, Mass.

Manufacturers of Open End Envelopes, Packets and Packaging Machinery

REP., Burnard C. York Packaging Machinery, 5807 West North Avenue, Chicago 39, Illinois

WEST COAST REPS., Peter D. Bowley & Assoc., 210 Mississippi Street, San Francisco, Calif.

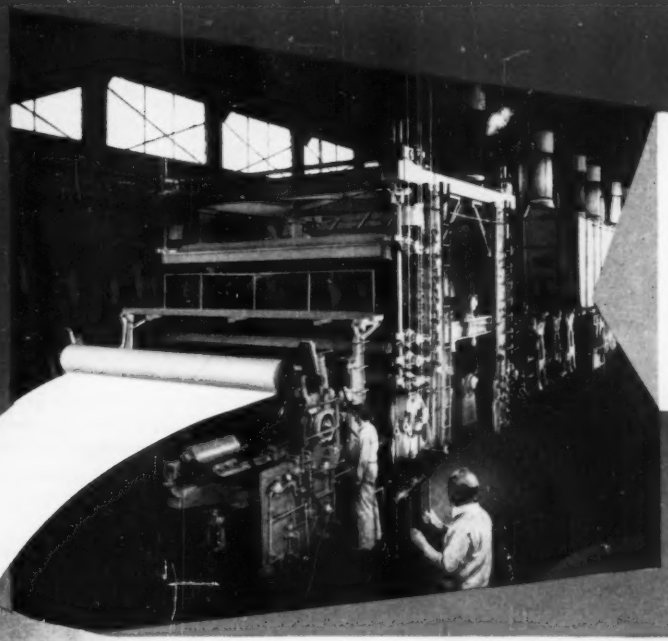
Contact Zumbiel for

a full complement of styles
(see classifications listed below)
— a 75 year reputation for service
— a long list of V. I. P. clients
— designers who win prizes with packages that win sales . . . modern facilities.

SET UP FOLDING TRANSPARENT MAILING PRONG METAL CORNERED FRAME-VUE

Over 75 years of good packaging ideas

C.W. ZUMBIEL COMPANY Norwood 12, Ohio



It's the unseen quality that produces true economy in Gaylord Containers

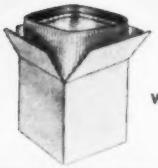
Gaylord Kraft Bag Paper "by the Mile"

Gaylord's modern paper machines are turning out tons of quality Kraft bag paper 24 hours a day, 7 days a week. And it still isn't enough.

Because Gaylord bags have received such wide acceptance, it is impossible for supply to keep up with demand under present conditions. Every effort is being made, however, to maintain output — so that shipments can be made as regularly as possible.

GAYLORD CONTAINER CORPORATION
General Offices: **SAINT LOUIS**

- FOLDING CARTONS
- KRAFT BAGS AND SACKS
- KRAFT PAPER AND SPECIALTIES
- CORRUGATED AND SOLID FIBRE BOXES



Waterproof Liners Jan-P-125

WATERPROOF CASE LINERS . . . to meet JAN-P-125 and Mil. - C - 10547 military specifications. Types (C1—C2—H4—L2—M etc.). Pressure Seal Type with self-sealing closure top.

Greaseproof Bags Jan-B-121 Method 1

GREASEPROOF BAGS . . . Approved Military JAN-B-121 specifications (Grade A—Grade C). Uniform tight seal construction — heat-sealing—durable.

For that problem—military or civilian—MEHL BAGS supply the solution! Made from polyethylene plastic . . . aluminum foil . . . cellophane and various paper, alone and in combination, they provide perfect protective qualities:

• WATERPROOF • GREASEPROOF • MOISTUREPROOF

Write, wire or phone us concerning your protective package problem!

If Your Packaging Requires Bags,

plan on

MEHL BAGS

Polyethylene bags Method 1A

POLYETHYLENE and POLYETHYLENE COATED BAGS—JAN-P-117 METHOD 1A . . . The versatile plastic film with unlimited uses—for military and civilian packaging—strong—durable.

Cellophane Bags

CELLOPHANE BAGS . . . Flat or square type construction — printed or plain—heat sealed for a wide variety of civilian items—also military requirements.

Method 1A Paper Foil Bags Jan-P-117

PAPER - FOIL BAG . . . Another military package to meet JAN-P-117 . . . all types—grades and classes. Non-blocking —easy to handle.

Cloth Foil Bags Jan-P-131 Method 11

CLOTH-FOIL BAGS . . . A Military Package conforming to JAN-P-131 —AN-C-67B. (MIL-C-6056) or AN-B20 specifications.

Converters of plastics, Cellophane, Foil and Other Flexible Materials

MEHL MFG. CO.

A Division of Sydney-Thomas Corp.

Phone CHerry 6430

2059 Reading Road Cincinnati 2, Ohio

Wrapping a heart is just one of the many forms that this mighty mite can do without the slightest bruising during the packaging operation.

Whether your product be as hard as a bearing . . . as sticky as tape . . . soft as a doughnut . . . or as temperamental as a heart Wrap-King will help you meet production requirements with a minimum of help. Write for further information . . . see how Wrap-King can cut your packaging cost.

Manufactured by

WRAPPING MACHINE SERVICE AND TOOL CO.
70 FRONT STREET, WEST SPRINGFIELD, MASS.

WRAP-KING CORPORATION
Sole Agent — Sales & Engineering
961 UNION STREET, WEST SPRINGFIELD, MASS.

SAVE...with this New Container of MOLDED PAPER by *Keiding*

Amazingly strong...

Light...

Low in Cost!

You, too, may have many uses for this tough new Keiding Molded Paper Container!

It has a tight-fitting cover, is ideally suited for granulated substances, powders, soaps, abrasives, small parts — even some liquids and semi-liquids.

Strong enough for shipping, attractive enough for a sales package, it is a sturdy container that will help solve your problems during the current material shortages.

WRITE for prices and samples. Standard colors, white — other colors available.

KEIDING PAPER PRODUCTS COMPANY
3048 N. 34th St., Milwaukee 10, Wisconsin
LARGEST MANUFACTURERS OF MOLDED PAPER CONTAINERS

ROTOGRAVURE ENGRAVINGS
for every use!

GET ALL THREE!

- *quality engraving*
- *color proofing*
- *dependable deliveries*

Cylinders, Inc. offers complete service in the preparation of rotogravure cylinders of all lengths and diameters . . . for every purpose.

CYLINDERS, INC.
Grenloch New Jersey
Blackwood 8-0343

Plants and people

The appointment of **E. H. Dours** as sales manager of the Pliofilm department of **The Goodyear Tire & Rubber Co.,** Akron, Ohio, has recently been announced.

E. H. Dours

Mr. Dours was formerly manager of Goodyear's Films & Flooring Div. He joined the company in 1948 and has worked extensively with packaging - machinery manufacturers to assist in the adaption of their equipment to handle Pliofilm.

New address for **Milprint, Inc.**, is now 4200 N. Holton St., Milwaukee, Wis. The transfer of the company's office facilities completes the movement of all of Milprint's Milwaukee operations to the new plant. The new telephone number is Edgewood 2-5800.

Clarke K. Walter has been named manager of the **Display Division, River Raisin Paper Co.,** Monroe, Mich. Mr. Walter had been production superintendent of the division since 1947. Also announced by the company is the appointment of **Warren M. Pellot** as assistant to **J. W. Walter,** secretary-treasurer. Mr. Pellot has been with River Raisin since 1948.

Herman B. Lermer, president, and **Irving S. Lermer,** vice president, **Celluplastic Corp.** of Newark, N. J., will sever their relations with that company at the end of 1951. They intend to retain an interest in the plastics industry, but their present plans are indefinite.

The Wolverine Paper Converting Machine Corp. and its associate company, **Nasko Machinery Corp.,** have acquired new and larger quarters at 3545 Seven Mile Road East, Detroit 34, Mich. This expansion program was necessitated by the increased use of Wolverine hydroprinters and cub sheeters and also to provide facilities for the development of new paper and plastic film converters.

Howard F. Schum has been appointed director of purchases and packaging for the **Arner Co.,** Buffalo, N. Y., pharmaceutical manufacturers. He succeeds **W. A. Mason,** former purchasing director and company secretary, who has resigned.

Also announced by the Arner company is that production facilities for hard-shell gelatin capsules are now operating in the Fort Erie, Ontario, plant.

Continental Can Co., New York, announces the election of **Thomas C. Fogarty,** executive vice president of the metal division, to the board of directors. Mr. Fogarty, who was vice president in charge of sales prior to his appointment to his present capacity, fills the vacancy on the board created by the resignation of **Sidney J. Steele.** Mr. Steele has been with the company since its founding.

The company also announces it will install a new paperboard machine for its Hopewell, Va., plant. Now being built, the machine will trim 250 in., will have 92 dryers and 26 felt dryers. It is designed primarily for the manufacture of fibre drum-liner board, according to Continental, and is expected to be in operation in the fall of 1952.

Continental also announces the acquisition of a 45-acre plant site in Pittsburg, Calif., where a modern one-story plant will be erected for the manufacture of fibre shipping drums to serve the Pacific Coast area.

Two additional managerial appointments have been announced by **Olin Products Co., Inc.,** the newly formed company for

C. F. Pfeifer (left) and G. R. Johnson

sale and distribution of Olin cellophane. **Charles F. Pfeifer** will be New York and New England Division manager and **George R. Johnson** will manage Eastern converter sales. Mr. Pfeifer, formerly with the Plastic Film Corp., will have charge of the territory embracing all the New England states, New York State and Metropolitan New York. Mr. Johnson was formerly with E. F. Drew & Co., Inc.

Construcion of a new multiwall paperbag plant for **The Hammond Bag & Paper Co.,** Wellsburg, W. Va., has been started in Pine Bluff, Ark. The new plant will replace the company's present facilities in Pine Bluff which have been taken over by the Army, according to the company. To minimize the loss of production time, machinery will be moved and placed in operation a piece at a time as sections of the building are completed. The new plant is expected to be in full operation by September 1.

Morris Kay and **William S. Stuhr** have been elected chairman of the board and president, respectively, of **United Board & Carton Corp.,** Syracuse, N. Y.

The Standard-Knapp Div. of **Emhart Mfg. Co.** announces the appointment of **T. T. Stephens** as sales engineer in northern Kentucky and Indiana for the division's line of automatic packaging machinery. Mr. Stephens will make his headquarters at 1211 W. 31st St., Indianapolis, Ind.

Bemis Bro. Bag Co., St. Louis, Mo., announces the following appointments: **P. J. Hewitt,** formerly sales manager of the Peoria multiwall bag plant, to assistant manager; **W. F. Mulvaney** succeeds Mr. Hewitt as sales manager; **H. O. Parrent,** transferred from the Phoenix, Ariz., sales office to the Los Angeles sales office; **L. P. Sempek** succeeds Mr. Parrent at Phoenix and **S. T. Newton** is sales manager for the Memphis plant.

Lyman Hall Allen, Jr., has been named division engineer of the viscose section, in the Central Engineering Dept. of **Celanese Corp. of America.**

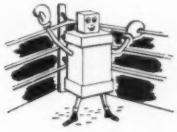
Wood Conversion Co., St. Paul, Minn., manufacturers of protective wood fibre padding, announce the appointment of **Robert B. Tyrrell** as industrial sales representative for Indiana and Kentucky. Mr. Tyrrell was formerly with Minnesota Mining & Mfg. Co.

National Container Corp., New York, one of the larger integrated manufacturers of corrugated paper products, has entered the paper-bag business by acquiring approximately 97% of the outstanding stock of **The Jaite Co.** of Jaite, Ohio. The Jaite Co., organized in 1905, owns and operates a kraft paper mill and manufactures multiwall paper bags. Including the Jaite company, National now has five kraft pulp and board mills, 11 corrugated box manufacturing plants, one kraft bag manufacturing plant and substantial reserves of timber.

The Chicago Show Printing Co. has announced the appointment of **Marvin T. Green** as director of sales of the printing division. Mr. Green, who has been with the firm for 10 years, will direct sales of the company's 28 branch offices from the main plant in Chicago.

Irving M. Footlik has been appointed materials handling consultant of **Stone Container Corp.,** Chicago. He will supervise materials handling for the company's box plants and paper mills and will

PATENTED



This sturdy lightweight shipping box handles a heavyweight's job!

Nuts and bolts, castings, hardware, metal extrusions, nails, textile yarns and finished goods, and similar heavy and bulky products really give a shipping box a beating. Until this H & D lightweight came along, only "heavyweight" boxes could take such punishment. But with stitched caps on half outer liners that completely eliminate distortion in stacking, this low-cost box takes all the beating a heavy load can hand out. No wonder it cuts packing and freight costs!

For scores of ways to cut shipping costs . . . to lower packing costs . . . and to increase sales through better display, write for H & D's book, "How to Pack It." Hinde & Dauch, 5102 Decatur St., Sandusky, Ohio.

H&D®

HINDE & DAUCH

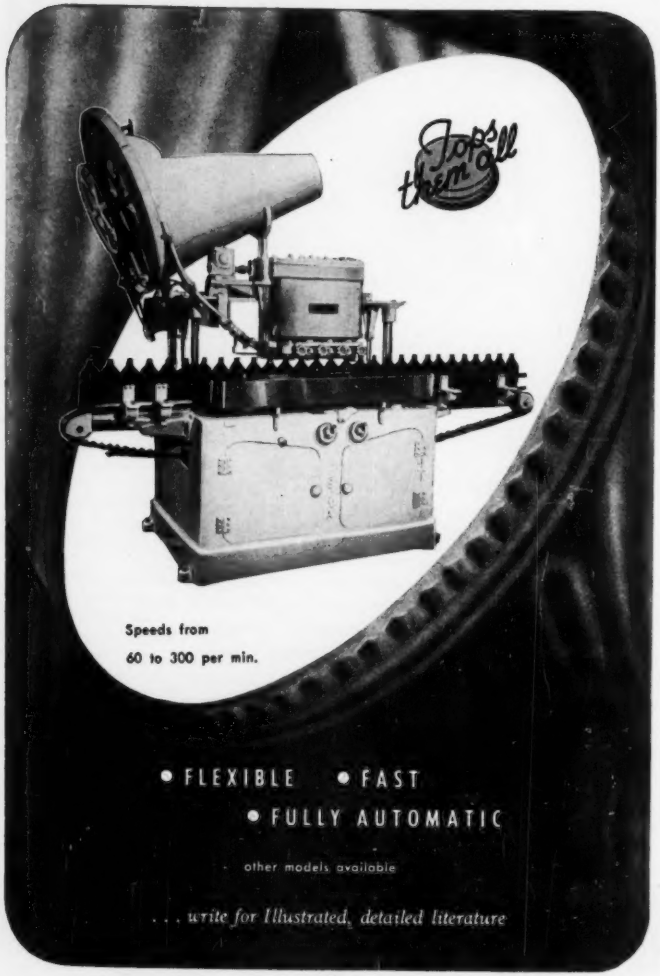
Authority on Packaging

FACTORIES IN: Baltimore • Buffalo • Chicago • Cleveland Detroit • Gloucester, N. J. • Hoboken, N. J. • Kansas City, Kan. Lenoir, N. C. • Richmond, Va. • Sandusky, Ohio St. Louis • Watertown, Mass. *Offices in principal cities.*

RESINA Cappers

new model RU200

the fastest screw-capping machine on the market—



• FLEXIBLE • FAST
• FULLY AUTOMATIC

other models available

. . . write for Illustrated, detailed literature

RESINA AUTOMATIC MACHINERY CO., INC.
BROOKLYN 31, N. Y.

Plants and people

counsel the company's customers on efficient methods of handling corrugated boxes.

F. R. Plum

Frank R. Plum has been named divisional vice president and general manager of **American Machine & Foundry Co.**'s bakery division, which manufactures a line of bread-wrapping machines and other bakery equipment.

Also announced by AMF is the election of **George A. Ingalls** as vice president. Mr. Ingalls had been a director and comptroller and will continue as company comptroller.

R. K. Swanson has been appointed assistant sales manager of **Champion Bag Co.**, Chicago. Mr. Swanson has had wide experience in cellophane and glassine packaging for the food and confectionery industries.

A 50% increase in its production of rust-preventive products and petroleum chemicals is expected to result from the construction by the **Nox-Rust Chemical Co.** of a new plant at 47th and Central Ave., Chicago, according to the company. Work on the new plant has started and some of its production facilities will be in operation early this fall. The firm will continue to use its present offices and plant at 2429 S. Halsted St., Chicago.

Marking a century of progress in the manufacture of industrial sewing equipment, the **Singer Sewing Machine Co.** celebrated its 100th anniversary at a luncheon recently in the Hotel Plaza, New York. Skeletonized models of two high-speed industrial machines were displayed to reveal automatic oiling and cooling systems and other mechanical features.

The establishment of a second plant by the **Arthur Colton Co., Div. of Snyder Tool & Engineering Co.**, in Paducah, Ky., to produce punches and dies for the pharmaceutical trade has been announced. **Kenneth B. Hollidge**, executive vice president of the Detroit pharmaceutical and packaging machinery firm, has been named general manager of the plant. He will be assisted by **William Vance**, plant superintendent.

The American Can Co. has announced plans to build a new metal container plant near Harrisburg, Pa., to serve the fruit and canning industries in eastern

Make your package a shopper stopper with attractive label and closure on the exactly right Duraglas bottle. Illustrated here is a 16-oz. amber Boston Round No. A-8520.

Turn a standard into a STANDOUT!

WOULD YOU ever guess that this striking container is an *inexpensive* Duraglas stock-mold bottle?

You can turn inexpensive Duraglas stock-mold bottles into attractive sales packages that are distinctly yours by adding unusual closures and labels designed to get mass impulse sales.

At the Duraglas Center, talented designers create unique packages without sacrificing the advantages of stock-mold containers—low original cost, strength and operating efficiency.

Call your local Owens-Illinois office today and find out how you, too, can take advantage of low-cost Duraglas stock-mold packages.

Duraglas bottles are protectors of quality

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

for your

MILITARY PACKAGING IN POLYETHYLENE OR BARRIER MATERIALS

TAKE ADVANTAGE OF . . .

experienced package engineering

versatile production facilities

a dependable source of supply

Flexible's package engineers are at your service without charge. We are specialists in flexible packaging—anything from lubricants to mattresses to engine parts.

Packages to meet moisture-vapor-proof, greaseproof and waterproof requirements of MIL-JAN-AN specifications. Bags, tubes, pouches, sheets. Plain or printed. Any length, any shape, 3" to 54" wide.

Industries throughout the country have come to rely on Flexible's double pledge: No deviation from top standards of materials and fabrication—and—delivery deadlines faithfully met.

for samples and prices—promptly—phone, wire or write

Flexible Package Co.

2638 S. Shields Ave. Chicago 16, Ill. DAnube 6-6262

***Spiral Wound* PAPER TUBES and CONTAINERS**

DIAMOND TUBES and Containers—the efficient and economical answer to so many production problems.

DIAMOND TUBES have the PRECISION to satisfy most exacting requirements; PLUS the experience and capacity to interpret your needs speedily and in quantity.

DIAMOND TUBES now serve the Electrical, Radio, Toy, Cosmetic, Medical fields and many, many others. It's entirely possible that a use can be discovered in your product.

DIAMOND TUBES can cut costs and time. Our Engineering Staff is always pleased with a new problem. Why not allow us to make a suggestion for your business?

DIAMOND STRAW & MACHINE CO.
32-36 West 18th Street New York 11, N. Y.

Plants and people

and central Pennsylvania and the Appalachian areas of Maryland, Virginia and West Virginia. When completed, the new plant will have a capacity for more than 400,000,000 food cans per year.

D. H. Ross

David H. Ross has been elected president and general manager of **Gair Co. Canada, Ltd.,** Toronto, Canada, a wholly owned subsidiary of **Robert Gair Co., Inc.** Three other appointments at the Canadian company were also announced: **W. George Cowan,** vice president, a director and assistant to the president; **Alpine L. Mitchell,** vice president in charge of sales for all divisions and a director; **J. Stanley Babbitt,** a director and vice president in charge of Montreal operations.

The Robert Gair Co., Inc., has announced the appointment of **Russell D. Scribner** as production manager of the company's folding carton division. Mr. Scribner was formerly with the DuPont company and Shellmar Products Corp.

North American Cyanamid, Ltd., announces an expansion of facilities at the company's plants in Niagara Falls and Welland, Ont., which will increase production of calcium cyanamide and dicyandiamide. The latter chemical is used in the production of melamine which is made at the Willow Island, W. Va., plant of American Cyanamid Co. The installation of equipment at Willow Island, reported at the same time, will increase that plant's capacity for producing melamine.

The opening of a new branch in Atlanta, Ga., by **Cadillac Products, Inc.,** Ferndale, Mich., manufacturers of industrial paper specialties, has been announced. The branch will be managed by **F. E. Rolston.**

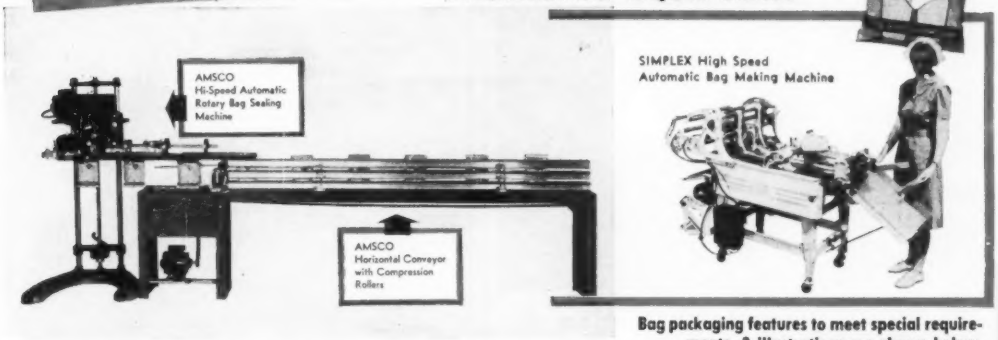
John Duncan, Jr., director of trade relations of **Owens-Illinois Glass Co.,** has accepted an appointment as temporary consultant to the Production Control Staff of NPA.

Gove S. Taylor, former sales manager of the **Continental Can Co.** and a pioneer in the paper container industry, died recently at his home in White Plains, N. Y.

Otis Bascom King, manager of manufacturing for the container division of **International Paper Co.,** New York, died recently.

making a quality product is *your* business
packaging it economically is *our* business!

that is why P. H. HANES KNITTING CO. uses AMSCO PACKAGING EQUIPMENT



Bag packaging features to meet special requirements. 3 illustrations are shown below.

If you are interested in reducing the cost of your bag packaging, an AMSCO engineer will show you how. We can supply cost-saving equipment for every operation, starting from the roll stock to the finished product . . . bag making, bag filling, bag conveying, bag sealing . . . individual units available for each operation or complete bag packaging set-ups.

Choose AMSCO to package your product in cellophane, maralux, diafane, foil, pliofilm, polyethylene or any other heat sealable material . . . printed or unprinted. Savings in labor and increased production pay for your AMSCO equipment in a comparatively short time. Contact AMSCO today!
Visit our booth No. 457 at
Atlantic City Packaging Exposition.

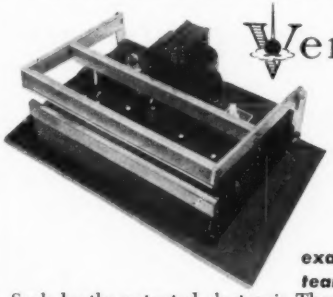
Write Dept. M-8 for Complete Catalog

AMSCO PACKAGING MACHINERY, INC.
31-31 48th Avenue Long Island City 1, N. Y.
Specialists in Diversified Packaging Equipment.

PERFECT SEALS ON ALL HEAT SEALABLE FILMS

and barrier materials without foil content

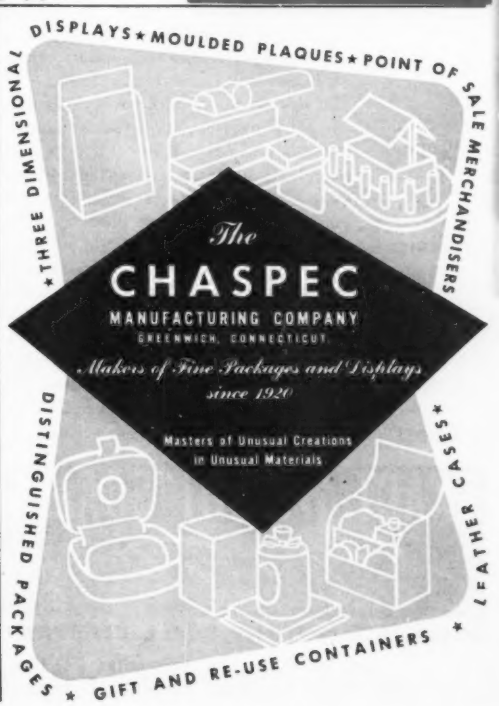
Vertrod

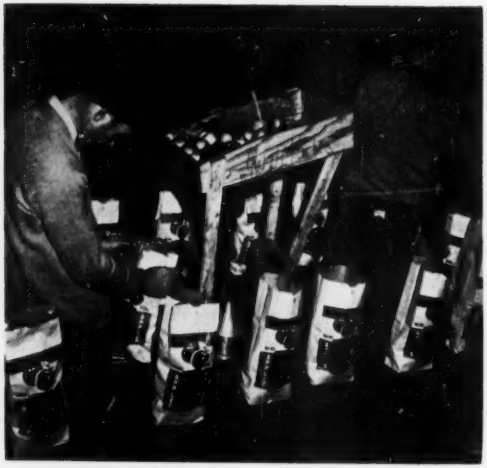


exact uniformity
tear resistant

Seals by the patented electronic Thermal Impulse Method. For polyethylene, saran, pliofilm, polyvinyl alcohol, acetates, non-metallic barrier materials, etc., up to .006".
Seals cool under pressure. Simple two-dial control. Easy to use. No warm-up needed. Seals gusseted bags, through packaged powders and liquids.
9" and 14" models. Extremely low priced.
Send today for bulletin and details

Vertrod Corp.
17 Williams Avenue Brooklyn 7, N. Y.





A sound apple packaging checkweighing operation using fast end-tower EXACT WEIGHT Scales. Pioneer Potato Co. Hightstown, N. J.

Sound Packaging is an Engineering Problem . . .

Sound Packaging becomes more and more an engineering problem in that all equipment, other than strictly packaging detail, must be correlated to produce quality products at a profit. From a packaging standpoint alone engineering thinking must consider packaging leak (over or underweight). This save dollars control measure is accurate checkweighing . . . by manual means if necessary (as illustrated above) . . . by semi-automatic methods when practical . . . by fully automatic application if possible. Present day EXACT WEIGHT Scales (all models) fit more different products; more high speed production lines; do more specialized jobs than any other industrial scales at the engineer's disposal today. Are you setting up a new operation; redesigning an old one or just expanding your present system? Save time, money, product, and man-hours equipment-wise by writing for full information pertaining to your particular engineering problem.

Sales & Service from Coast to Coast

EXACT WEIGHT SCALES

Industrial Precision

THE EXACT WEIGHT SCALE COMPANY

914 W. Fifth Ave., Columbus 12, Ohio
2920 Bloor St., West, Toronto 18, Canada

GLUEMASTER

Round Can-tainer Labeler
The Latest Development in Labeling

The only method of labeling between the hand application and the completely automatic.

THREE TIMES THE PRODUCTION WITH GLUEMASTER

GLUEMASTER furnished in two models . . . Hand Feed — Automatic Feed.

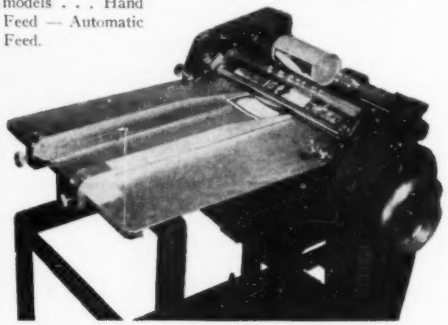
FEATURING . . . Size and style — RC 12" and 18".

Capacity — 1½" to 8" in diameter; 1" to 18" in length.

Size of Label — Half, three-quarter or all around.

Speed — variable speed, up to 30 per min.

Positive Registration.



KENNETH J. MOORE & CO.
1778 West Estes Avenue — Chicago 26, Ill.

ARE YOU

Packaging

TO GOVERNMENT SPECIFICATIONS?

If you are, why not call on us to help you determine your requirements and to supply you with the right Army, Navy and/or Air Force *approved* Preservation and Packaging Materials for your specific order . . . many of which we have *in stock for immediate delivery.*

We've specialized in packaging materials for more than 15 years and during the last war and the present emergency have devoted our facilities to supplying industrial and government packaging materials to armed service specifications.

Write for our index and price specification sheets on Packaging Materials and our use chart on Preservative Oils and Compounds. No obligation.

Milgate YOUR ASSURANCE OF QUALITY

PACKAGING DIVISION
E. W. Twitchell Incorporated
2837 N. Third St., Phila. 33, Pa.

A new complexion on packaging

FISHER'S FOILS

FISHER'S FOILS LIMITED, EXHIBITION GROUNDS, WEMBLEY, MIDDLESEX, ENGLAND
Phone: Wembley 6011 *Cables & Grams: Liofnit, Wembley (ABC Code 6th Edn.)*

For your information

Officers elected at the recent annual convention of the **National Paper Box Mfrs. Assn., Inc.,** are: **Douglas T. Neale** of the Edwin J. Schoettle Co., president, succeeding **A. S. Daniel** of W. C. Ritchie & Co.; **Clifford C. Vatter, Sr.,** Bradley & Gilbert Co., vice president; **Walter P. Miller, Jr.,** Walter P. Miller Co., Inc., treasurer. Directors named to represent the nine geographical divisions are: New England, **Ralph L. Harden** of Mason Box Co.; Metropolitan, **T. Harry Lange** of Newark Paper Box Co.; Empire State, **William C. Milsom** of F. N. Burt Co., Inc.; Central, **William H. Albrecht** of W. H. Albrecht Co.; Southern, **Malcolm A. Peak** of Old Dominion Box Co., Inc.; Southwest, **Lawrence S. Pollock** of Pollock Paper Corp.; Western, **Dean C. Mathews** of Quality Park Box Co.; Midwestern, **Ermin P. Ruf** of Wayne Paper Box & Printing Corp.; Pacific, **Charles H. Woessner** of Boxcraft Paper Box Co.

The Sixth Annual National Meeting of the **Forest Products Research Society** will be held in Milwaukee, Wis., June 23 to 25, 1952. Also announced by the society is the appointment of **James F. Hamilton** as director of research.

The 15th Annual Time and Motion Study and Management Clinic sponsored by the **Industrial Management Society** will be held at the Sheraton Hotel, Chicago, Nov. 1 and 2. More than 2,000 industrial engineers, works managers, plant superintendents and supervisors are expected to attend the technical sessions. Inquiries may be addressed to the society at 35 E. Wacker Drive, Chicago 1, Ill.

A new bulletin entitled "Installation, Operation and Maintenance of Chain Drives and Conveyors" has just been published by the **Chain Belt Co.** Illustrations show graphically the correct and incorrect ways of solving chain installation, operation and maintenance problems. Copies of this 34-page bulletin, No. 51-7, may be had on request to the Chain Belt Co., 1600 W. Bruce St., Department PR, Milwaukee, 4, Wis.

The Plant Maintenance Show will next be held at Convention Hall, Philadelphia, Jan. 14-17, 1952, according to **Clapp & Poliak, Inc.,** the exposition management. Displays are expected to cover an area almost four times that of the first show held in 1950. More than 200 companies are expected to participate. Concurrently with the show, the **Plant Maintenance Conference** also will be held. **L. C. Morrow,** consulting editor, *Factory Management,* will serve as chairman. Advance registration cards and hotel information may be obtained from Clapp & Poliak, Inc., 341 Madison Ave., New York.

Government staff executives and members of the nailed wooden box and crate industry participated in round-table discussions to be used as a basis in planning cooperative action to fill defense and essential civilian container needs during the recent 52nd annual meeting of the **National Wooden Box Assn.** Unity, cooperation and undivided strength during the present emergency were the themes of the opening address by **H. H. Pien,** the association's president.

The Packaging Assn. of Canada, organized at a meeting last November, has established headquarters at 24 Isabella St., Toronto 5, Canada. Membership now numbers 124 and the organization is actively pursuing its general program of promoting the progress of packaging, packing and shipping in Canadian commerce through dissemmination of information that will lead to higher standards of operation in the packaging field. Plans of the association include the holding of an annual packaging conference and exposition, regular publications digesting local and world-wide packaging information, the establishment of a library service, organization of a technical committee and of extension committees for special studies to undertake liaison with other formal bodies in Canada and elsewhere.

The Riegel Paper Corp., New York, has received an award for outstanding industrial advertising from the **National Industrial Advertisers Assn.** for their advertising campaign on technical industrial papers produced by Riegel at their New Jersey mills. NIAA awards are presented annually for excellence in planning, execution and achievement of definitely stated advertising objectives.

"Advertising Media" by **Ed Brennen** (McGraw-Hill Book Co., 330 W. 42nd St., New York; $6) offers a comprehensive approach to an understanding of the functioning of the major forms of advertising media, as well as effective methods and means of buying and selling space and time. Virtually all important recent advances, including television, are covered. Written especially for the beginner, it also reviews for the professional some of the most practical current-day techniques.

At the recent annual meeting of the **American Society for Testing Materials,** 57 new standards were approved and over 200 existing tentative specifications and standards were revised. As a result there are now about 1,775 ASTM standards available. During the past year two new technical committees were established—one dealing with methods of atmospheric sampling and analysis and the other on radioactive isotopes. The scope of the new committee (E-13) on absorption spectroscopy was also approved; it will cover the coordination and formulation of methods of spectroscopic analysis by absorption, fluorescence and scattering techniques. Members of the society also approved the establishment of a new committee to cover cellulose and cellulose derivatives. **Truman S. Fuller,** General Electric Co., was elected president for the coming year.

The 31 papers presented during the 1950 "Short Course" on packaging and materials handling sponsored by the **Society of Industrial Packaging & Materials Handling Engineers** under the auspices of Temple University have been published in a 217-page, paper-backed volume entitled, "Proceedings." Single copies are available from the SIPMHE's offices at 20 W. Jackson Blvd., Chicago 4, Ill., for $4 and a special quantity price is available for multiple purchases; special discounts are also given to schools, libraries and associations.

Irving J. Stoller, president of Fibleco-Illinois Corp., Chicago, and **Harry G. Diefendorf,** packaging and materials-handling consultant, Detroit, have been given honorary life memberships in the society.

The proceedings of the second **Plant Maintenance Conference** held concurrently with the **Plant Maintenance Show** in January, 1951, have now been published by **Clapp & Poliak, Inc.,** New York. The volume, "Techniques of Plant Maintenance—1951," includes the text of all papers and discussions given during the conference as well as answers prepared by speakers for many questions that could not be answered because of time limitations during the meetings. Two sessions were devoted to the maintenance problems of paper and paper products plants and of food processing plants, in which the speakers gave many specific examples of how their problems were handled. The book is being sent without charge to all registered plant operating executives who attended the conference and is available to others for $6 per copy. Copies may be obtained by writing the publishers at 341 Madison Ave., New York.

Unpackaged merchandise lacks a good salesman...

FORMULA *for*

S olicit Contacts

A rouse Interest

L imit Competition

E stablish Preference

S eal the Sale

Your Package Helps Make the Sale

OLD DOMINION
Box Company, Inc.

Plants located throughout the South

Executive Offices: LYNCHBURG, VA. • *Sales Offices:* CHARLOTTE, N. C.

DESCRIPTIVE LITERATURE ON REQUEST

Hayssen
ELECTRIC EYE
WRAPPING MACHINES

The Hayssen wraps a great variety of products . . . is fully automatic . . . has a long operating life because it is mechanically simple . . . and functions quietly at a high production rate. Low in initial cost, it keeps the unit-cost of wrapping at a low level.

HAYSSEN MFG. COMPANY • SHEBOYGAN, WIS.

Sales zoomed when a well-known manufacturer of raincoats began marketing them in this shoulder carrier in several attractive colors. Women found it ideal, not only for the raincoat (wet or dry), but also for knitting, shopping, and a score of other purposes. Conceived, designed and made entirely in our complete, modern plant, it is a typical example of our versatility. Because we make most styles of containers and combinations, we give your packaging problem a more dramatic, sales-producing solution. Call one of our representatives or write for free consultation service.

PAPER PACKAGE COMPANY

Folding Cartons · Transparent Acetate Boxes · Set-Up Boxes · Spiral-Wound Paper Tubes

1036 N. CAPITOL AVE., INDIANAPOLIS 6, IND.
Branch Offices: Chicago, Detroit, Cincinnati

ROTOGRAVURE CYLINDERS

A Complete Service All Under One Roof and One Management Responsibility

- Cylinder Machining
- Copper Depositing and Polishing
- Photography and Art Work
- Cylinder Engraving
- Hard Chromium Plating

CHAMBERS-STORCK COMPANY, INC.

751 North Main Street
Norwich, Conn.

She doesn't want a package!

Yet retailers and manufacturers everywhere agree that today good packaging is vital to volume turnover.

A package with shelf appeal catches the eye, suggests purchase, but the consumer buys the *product*—not the package, so she wants to see what she's buying. Transparent protective packaging is the answer. Glamourising the product, it fosters the impulse to buy. Revealing the product, it clinches the sale.

This is the reasoning behind today's ever increasing demand for cellulose film which we, as the largest exporters of cellulose film in the world, are now striving to satisfy.

BRITISH CELLOPHANE LIMITED

Sales Offices: 17/19 STRATFORD PLACE, LONDON, W.1, ENGLAND

Reg. Offices and Factory: BATH ROAD, BRIDGWATER, SOMERSET

smoothest
seal
in the
world
Roto's a smooth worker when it comes to making polyethylene bags. Not a wrinkle or pucker to mar a sleek, smooth appearance. Beautifully seals a wide range of thicknesses quickly, efficiently.

MODEL PO-2
Latest Development
In Heat Seal Bag Making

● Delivery system automatically stacks bags ● Handles sheeting or tubing ● Production rates based on film gauge, not bag size ● Exceptionally fast production ● Adaptable to plioflm

Roto Bag
MACHINE CORP.
304 East 22nd Street
New York 10, N. Y.

Washington review

NPA has cracked down on the use of steel drums, kits and pails and on inventories of these containers. Distribution and use of steel drums is restricted by Order M-75. After Sept. 1, drums cannot be used for the packaging of 44 commodities listed in Schedule I of the order. Certain exceptions are made for defense-supporting activities. Already effective is a ban on the use of drums in packing any products that were not so packed during the 12-month period that ended June 30, 1951.

Except for some seasonal products, you can't use in third-quarter 1951 and following quarters more than 22.5% of the tonnage of new drums used during calendar year 1950. Inventories, including used drums, must be held to a 45-day supply on the basis of scheduled rates of operation.

Paperboard

Manufacturers of special paperboard used in making food containers are now required to reserve 5% of their monthly production for Government use.

Producers of cardboard used in making shipping tags, posters, etc., must reserve 10% of their monthly output. If not all the set-aside is requisitioned at a specified monthly date, it can then be sold to regular customers.

Information service

Businessmen in Washington who seek time-saving and authoritative information regarding NPA and DPA regulations are getting help from the Business Inquiry Center in the old GAO Building.

The Center handles queries, provides names of proper authorities to see and issues free copies of orders and releases. The Center can often handle problems for visitors to save numerous calls at various agencies. The same type of service, of course, is available at the more than 100 district and regional offices of the Department of Commerce.

Materials supply

NPA, in classifying the supply status of various materials, reports that current demands are putting a heavy strain on supplies of a number of key materials. Certain alloy metals, such as nickel, cobalt and tungsten, are in very short supply. All non-ferrous metals are tightening rapidly.

Steel, in spite of capacity production and increased facilities, is becoming critical. Only a few types and shapes are generally available.

Chemicals are spotty, with key items tending to tighten related groups, though many important categories are still in fair balance.

The range of adaptability among plastics as substitutes for metals already has resulted in such tightening of their supply that cellulose acetate is the only important plastic still generally available.

Lumber is one large materials group that as yet has not been seriously affected.

Aid for small business

More than 200 full-time small business specialists have been appointed by the Army at installations throughout the United States to aid small business firms interested in learning how they participate in the current military procurement program.

Smaller plants seeking to organize permitted defense-production pools find helpful guidance in a pamphlet "Pooling Production for Defense." The pamphlet, which cites both advantages and disadvantages of pool operation, is issued by the Defense Production Administration.

Tin tightens

Third-quarter users of pig tin are limited to 90% by weight of their average monthly use of pig tin during the base period. Manufacturers of milk cans or tinplate are not included in the restriction, for they are now programmed under CMP. Purchase of pig tin without allocation is limited to 6,000 lbs. The restrictions are covered in an amendment to NPA Order M-8.

CMP list revised

NPA has revised its "Official CMP Class B Product List." In the original list, issued last May, consumer durable goods were designated by asterisks and manufacturers who produced such items were requested not to file for material allotments for the third quarter.

These products are no longer designated by asterisks on the revised list. If you manufacture any of the products, you should file for authorized CMP allotments for the fourth quarter.

Blackplate restricted

For the first time, quotas and preference ratings have been set on the use of cans made of blackplate. The restrictions are covered in an amendment to Can Order M-25. Prior to the amendment, use of blackplate was not limited for such products as dry spices, paints, coffee and

For the Finest

Cotton
Rayon
Wool
20
Colors

Flock

—Come to the "Shepherd"...

CLAREMONT WASTE MFG. CO.
World's Largest Manufacturer of Flock
CLAREMONT, NEW HAMPSHIRE

NOW! Dependable

PAMARCO

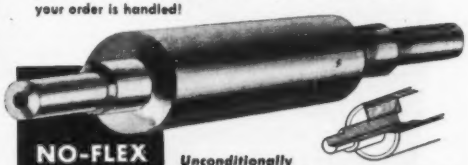
quality in

CYLINDERS FOR EVERY PURPOSE

FEATURING—
Precision Quality
Fast Delivery
Complete Engineering
Service

—ONE RELIABLE SOURCE
FOR ALL CYLINDER REQUIREMENTS

When you need cylinders — plate, rotogravure, rubber covered or plain steel — Pamarco engineering and production experience in all phases of printing and packaging systems can guarantee highest possible performance, long service and lower costs. The next time you need cylinders, call Pamarco — you'll like the way your order is handled!



NO-FLEX
GUARANTEED
CYLINDERS
for better
ANILINE
printing

Unconditionally
Guaranteed for Severe Service

New No-flex cylinders can't flex or whip — assure perfect impressions on every run. Exclusive Pamarco tube construction reduces weight — has proven stronger than solid steel by actual tests. All cylinders ground finished to exact specifications and fully inspected before shipment. For faster service, lower costs and better printing, call Pamarco.

ROTOGRAVURE CYLINDERS

Pamarco supplies accurate core or base cylinders especially designed for use in rotogravure process reproduction work. All Pamarco Rotogravure Cylinders provide long service in continuous production and can be engineered to special needs.

RUBBER COVERED ROLLERS

Pamarco cores for rubber covered rollers have a reputation for quality based on fine performance in countless applications in a diversified list of industries. Whatever your operation — count on Pamarco dependability, increased efficiency.

PLAIN STEEL ROLLS

Pamarco plain steel rolls for every purpose are precision ground and finished to closest tolerances, as specified. Any size or shape can be produced quickly to meet your installation schedule. Send blueprints for prompt estimates without obligation.

CALL NOW FOR FAST, COMPETENT SERVICE!

PAMARCO
ANILINE PRINTING PRESSES
EVENFLO ENGRAVED ROLLERS
PAPER CONVERTING MACHINERY
NO-FLEX PLATE ROLLS

PAPER MACHINERY & RESEARCH • INC
1014 OAK STREET • ROSELLE, NEW JERSEY

MILITARY
PACKAGING

We manufacture and distribute a complete line of materials for packaging under the following specifications.

MIL	JAN	AN
JAN-B-121	JAN-P-131	AR-61
JAN-B-148	JAN-P-140	AR-63
JAN-P-108	JAN-P-658	RM-101
JAN-P-116	AN-B-20	MIL-C-6056
JAN-P-117	AN-C-67b	UU-P-271a
JAN-P-125	AN-E-1b	100-14-A
JAN-P-127	AN-T-12a	19-8-13

WRITE, PHONE or WIRE YOUR ORDERS

BAGS AND ROLLS { Grease-Proof, Moisture-Proof, Vapor-Proof, Water-Proof

CHARLES E. KING & CO.
970 W. CHICAGO AVE. CHICAGO 22, ILLINOIS
Telephone: HAymarket 1-0165

labels
tags
seals
wraps

indivisualized labeling

For all seasons throughout the packaging year. Call CAMEO today for labeling that is both informative and distinctive.

Labels and Seals
multi-color
printed
embossed
gold & silver foil
gummed,
heat seal
pressure sensitive

Distinctive Tags
for
advertising
promotion
marking
production

CAMEO
DIE AND LABEL COMPANY
designers and craftsmen
156 WEST 14th STREET
NEW YORK 11, N. Y.
OR 5-0228

Washington review

many other items not requiring a tin coating for cans. Many changes have been made in the schedules attached to M-25.

Steel output rising

Steel production for the third quarter is expected to reach 20,800,000 tons, according to NPA. Pre-Korea, production was running at the rate of 18,221,665 product tons per quarter.

The third-quarter supply of steel is expected to be used as follows: (1) direct requirements—1,760,000 tons; (2) defense requirements covered by CMP—15,660,000 tons and (3) "free-area" steel, not covered by CMP or priorities—3,380,000 tons.

Looking ahead

According to Manly Fleischmann, Administrator, Defense Production Administration, we have entered the second phase of the mobilization program and shortages of critical materials will begin to pinch harder. In the first phase of the program, the amount of materials actually consumed in the production of defense items was relatively small. Defense will take bigger bites out of the supply of materials in the immediate future.

CMP for durables

In a move to bring American industrial consumption of controlled materials into balance with estimated supply and defense requirements, NPA has announced that the use of steel, copper and aluminum in most consumer durable goods in the third quarter will be controlled by one order, M-47A.

Packaging machinery

Manufacturers of packaging machinery have been commended by NPA for their showing in the industrial scrap-collection program.

Some of the firms, meanwhile, report difficulty in obtaining bearings, electric motors and switches. Also, third-quarter allotments of copper-base alloys and cast aluminum are said to be insufficient.

Containers directive

If you produce 55-gal. steel drums (18 gauge and lighter) you are required by NPA to reserve 5% of your total monthly production during August and September for delivery to specified holders of validated export licenses covering petroleum,

Schaefer
GLUERS and CEMENTERS

APPLY GLUE TO LABELS
FOR
BOXES - BOTTLES - CANS
PARCEL POST PACKAGES

SAVE 35% LABOR. Speedy machine-gluing instead of slow brush-daubing. Round, square and die-cut labels glued. No adjustment except for glue coating. Ideal for short runs and production.

NEAT RESULTS. Printing stays clean. No glue ooze at edges of labels. No lumps, blisters or wrinkles. Easy to operate.

FREE TRIAL

SCHAEFER
7" LABELER
Disassembled for Cleaning

PRACTICAL CONSTRUCTION. Bronze tank and bearings. Calibrated dial glue control. Hand & motor driven. Use vegetable or resin glue. 7", 12", 16", 22", 28", 34", 42" wide.

Schaefer
MACHINE CO.
55 CARBON ST.
BRIDGEPORT, CT.

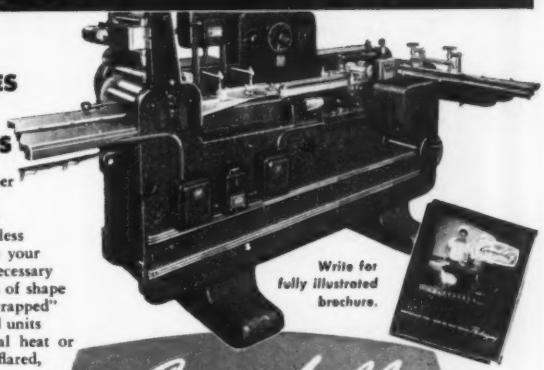
Here's a baker's helper

THAT SPEEDS WRAPPING PRODUCTION AT NEW LOW COSTS

PACKAGES CAKES COOKIES • BISCUITS CRACKERS • SPECIALTIES

With the automatic Campbell wrapper you not only attain amazing new packaging speeds up to 120 units per minute — with fewer operators and less materials — but you greatly increase your products' "eye and buy" appeal, so necessary to modern merchandising. Regardless of shape or substance, your product is "float wrapped" in single or multiple, square-cornered units . . . *without breakage.* Longitudinal heat or glue sealing with end seals crimped, flared, or folded protects flavor and "oven-freshness", safeguards against dust and dirt, and prolongs shelf life. Machine uses materials of all types and can be furnished with any standard or custom design feed and delivery required.

Wraps products of all shapes . . . and numerous sizes



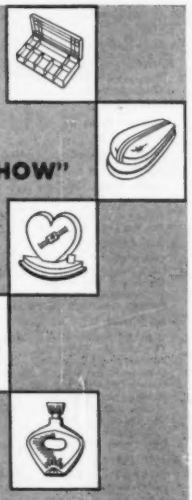
Write for fully illustrated brochure.

Campbell WRAPPER

HUDSON-SHARP MACHINE CO. • GREEN BAY, WIS.

Manufacturers of Aniline and Gravure Presses, Folders, Interfolders, Laminators, Waxers, Embossers, Slitters, Sheeters, Roll Winders, Packaging Machines, Diapers and Tissue Converting Units.

New York office: 55 West 42nd St.



Plastic

PACKAGING "KNOW-HOW"

FOR EVERY PURPOSE

Whether your packaging needs are for civilian goods or highly specialized Army, Navy, and Air Force requirements, GILBERT PLASTICS has the facilities, skill, and experience necessary from the planning and designing stage . . . tooling . . . manufacturing . . . assembling . . . to the finished product.

May we have your requirements and specifications for prompt quotation.

GILBERT PLASTICS, INC.

1415 Chestnut Ave., Hillside 5, N. J.

FOR BETTER PACKAGING!

PARTITIONS

THAT PROTECT AND SAFEGUARD YOUR PRODUCTS

•

IMMEDIATE ATTENTION
Given to Requests for Estimates

Prompt Deliveries Guaranteed

Reasonable Prices Assured

WRITE, PHONE, WIRE for QUOTATIONS on YOUR REQUIREMENTS

PETER PARTITION CORP.

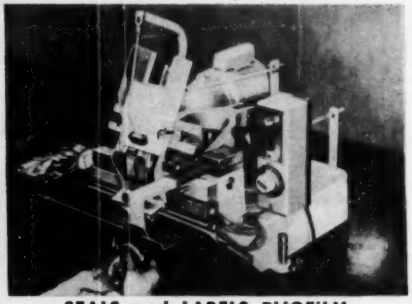
Manufacturers of Paper Board Partitions

19-21 HEYWARD STREET
BROOKLYN 11, N. Y.
Telephone: TRiangle 5-4033

SULLIVAN

AUTOMATIC BAG SEALING AND LABELING MACHINE

For Sealing and Labeling in a Single Automatic Operation



SEALS and LABELS PLIOFILM, POLYETHYLENE, CELLOPHANE

SULLIVAN

HEAT SEALING EQUIPMENT CO.

1224-28 N. FRONT STREET, PHILA. PA.

UNSCRAMBLES REGULAR AND ODD SHAPES

Faster . . . Easier

ISLAND STRAIGHTLINE

UNSCRAMBLER SPEEDS UP PRODUCTION

● Cartons or cases of bottles, jars, or cans dumped on table are instantly unscrambled and regimented into a single file to keep a continuous flow of units on your production line. Reduces labor costs . . . minimizes breakage . . . saves floor space . . . and meets all sanitary specifications as operator does not handle mouths of units.

GET THE FACTS NOW!

LIBERAL TRADE-IN ON OLD STYLE UNITS

Just look at these allowances on old model Unscramblers. What a golden opportunity to purchase a new Unscrambler which handles such containers as flask bottles, etc., impossible with old type units.

All 5' old style Straightline Unscramblers $125.00
All 6' Cyclone Belt Straightline Unscramblers $175.00
All 6' Rex Belt Straightline Unscramblers $250.00

Old Unscramblers must be shipped to our factory, transportation charges prepaid, within 30 days after delivery of new Unscramblers.

ISLAND EQUIPMENT CORP. 27-01 Bridge Plaza N. Long Island City 1, N. Y. Dept. MP8

Please send full details on the Styl-O-Matic Unscrambling Tables, and complete information on your Trade-In Offer.

NAME_____

ADDRESS_____

CITY_____ STATE_____

Distributors of

Kimpak®

CREPED WADDING

ALABAMA
Graham Paper Co. ..... Birmingham

ARIZONA
Blake, Moffitt & Towne ..... Phoenix, Tucson
Graham Paper Co. ..... Phoenix
Zellerbach Paper Co. ..... Phoenix

CALIFORNIA
Blake, Moffitt & Towne ... Fresno, Long Beach, Los Angeles, Oakland, Sacramento, San Bernardino, San Diego, San Francisco, Santa Rosa, San Jose, Stockton
Zellerbach Paper Co. Emeryville, Fresno, Los Angeles, Sacramento, San Diego, San Francisco, San Jose, Stockton

COLORADO
Carpenter Paper Co. ... Denver, Pueblo
Graham Paper Co. ..... Denver

CONNECTICUT
Charles F. Hubbs & Co. ... Bridgeport
The Rourke-Eno Paper Co. ... Hartford

FLORIDA
Graham-Jones Paper Co. Jacksonville, Tampa

GEORGIA
Graham Paper Co. ..... Atlanta
National Paper Co. ..... Atlanta
Somerville-Seybold Div. of Henley Paper Co. ..... Atlanta

IDAHO
Blake, Moffitt & Towne ..... Boise

ILLINOIS
Abana Products ..... Chicago
Bradner Smith & Co. ..... Chicago
Graham Paper Co. ..... Chicago
Knox & Schneider Paper Co. . Chicago
S. V. Cain, Inc. ..... Peoria

INDIANA
The Millcraft Paper Co. ... Ft. Wayne
Crescent Paper Co. ..... Indianapolis
Schwarz Paper Co. ..... South Bend

IOWA
Carpenter Paper Co. ..... Des Moines, Sioux City

KANSAS
Carpenter Paper Co. ..... Topeka
Graham Paper Co. ..... Wichita

KENTUCKY
Graham Paper Co. ..... Louisville

LOUISIANA
Graham Paper Co. ..... New Orleans

MAINE
Carter Rice & Co. Corp. ..... Augusta

MARYLAND
Hubbs & Corning Co. ..... Baltimore
The Whitaker Paper Co. ..... Baltimore

MASSACHUSETTS
Carter Rice & Co. Corp. ..... Boston
H. J. Dowd Co., Inc. ..... Cambridge
Charles A. Esty Paper Company ..... Worcester
Bulkley, Dunton & Co. Inc., Springfield

MICHIGAN
Cortright Paper Co. ..... Battle Creek
The Whitaker Paper Co. ..... Detroit
Beecher, Peck & Lewis ..... Flint
Graham Paper Co. ..... Grand Rapids
Crown Paper & Bag Co. ..... Jackson
Bermingham & Prosser Company ..... Kalamazoo
The Weissinger Paper Company ..... Lansing
Reid Paper Co. ..... Saginaw

MINNESOTA
Graham Paper Co. ..... Minneapolis
Carpenter Paper Co. ..... Minneapolis, St. Paul

MISSOURI
Carpenter Paper Co. ..... Kansas City
Graham Paper Co. ..... N. Kansas City, St. Louis
Smith-Scharff Paper Co. ..... St. Louis

NEBRASKA
Carpenter Paper Co. ..... Grand Island, Lincoln, Omaha

NEW MEXICO
Carpenter Paper Co. .... Albuquerque
Graham Paper Co. ..... Albuquerque

NEW YORK
Hubbs & Howe Co. ..... Buffalo, Niagara Falls
Chas. F. Hubbs & Co., L. I. Div. Hubbs Corp. ..... Mineola
Charles F. Hubbs & Company ..... New York
Heller & Usdan, Inc. ..... New York
Herbert A. Post, Inc. ..... New York
The Alling & Cory Co. ..... Rochester
J. & F. B. Garrett Co. ..... Syracuse

NORTH CAROLINA
Southern Paper Products Co. ..... Asheville
Henley Paper Co. ..... Charlotte, Gastonia, High Point
Dillard Paper Co. ..... Charlotte, Greensboro, Wilmington

OHIO
Millcraft Paper Co. ..... Akron
The Chatfield Paper Corp. ..... Cincinnati
The Whitaker Paper Co. ..... Cincinnati
Hubbs & Howe Co. ..... Cleveland
Reese-Edwards Paper Co. ... Cleveland
The Scioto Paper Co. ..... Columbus
The Ohio & Michigan Paper Company ..... Toledo

OKLAHOMA
Carpenter Paper Co. .... Oklahoma City
Graham Paper Co. ..... Oklahoma City
Tulsa Paper Co. ..... Tulsa

OREGON
Blake, Moffitt & Towne ..... Portland
Zellerbach Paper Co. ..... Portland

PENNSYLVANIA
Hubbs & Howe Co. ..... Erie
Morris Paper Co. ..... Johnstown
J. N. L. Smythe Co. ..... Philadelphia
D. L. Ward Co. ..... Philadelphia
The Chatfield & Woods Co. of Pa. ..... Pittsburgh
Williamsport Paper Co. ... Williamsport

RHODE ISLAND
Carter, Rice & Co. Corp. .... Providence

SOUTH CAROLINA
Dillard Paper Co., Inc. ..... Greenville

TENNESSEE
Dillard Paper Co., Volunteer Division ..... Knoxville
Graham Paper Co. ..... Memphis, Nashville
Wurzburg Bros. ..... Memphis, Nashville
Clements Paper Co. ..... Nashville

TEXAS
Carpenter Paper Co. ..... Dallas, El Paso, Fort Worth, San Antonio
Graham Paper Co. ..... Dallas, El Paso, Houston, San Antonio

UTAH
Carpenter Paper Co. Ogden, Salt Lake City
Zellerbach Paper Co. Salt Lake City

VIRGINIA
Dillard Paper Co. ..... Bristol, Roanoke
Hamilton Paper Co. ..... Richmond

WASHINGTON
Blake, Moffitt & Towne ..... Seattle, Spokane, Tacoma
Zellerbach Paper Co. Seattle, Spokane
Spokane Paper & Stationery Company ..... Spokane

WEST VIRGINIA
Morris Paper Co. of W.Va. ... Clarksburg

WISCONSIN
Wisconsin Paper & Products Co. ..... Milwaukee
Sawyer Paper Co. ..... Neenah
Service Paper Co. ..... Racine

CANADA
F. F. Barber Machinery Company, Ltd. ..... Toronto, Ontario
Mid-West Paper Ltd. Winnipeg, Manitoba

HAWAII
The Honolulu Paper Co. Ltd. ..... Honolulu, T. H.

*T. M. REG. U. S. PAT. OFF. & CAN.

KIMBERLY-CLARK CORPORATION, Neenah, Wisconsin

250 Park Ave. New York 17 ● 8 S. Michigan Ave., Chicago 3
155 Sansome St., San Francisco 4 ● 22 Marietta St., Atlanta 3, Ga.

Kimpak* Float Packaging

DINING TABLE
Surface Protection

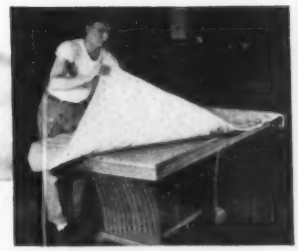
Cuts shipping costs— reduces damage in transit!

Does the product you make get the best possible shipping protection on its way to market? Does your packaging operation move quickly—with minimum demand on labor and material?

A vigorous "yes!" is answered by the scores of companies that investigated—and changed—to KIMPAK* Float Packaging. For it's the world's most effective cushioning protection, at lowest true cost.

KIMPAK creped wadding is a pre-fabricated, grit-free material available in many thicknesses. It's soft, clean, easy to apply as wrapping paper. Regardless of the type of product you ship—you'll find a specification of KIMPAK designed especially to protect against countless shipping hazards. It cannot mar or chemically affect any type finish—protects against scratching, rubbing, press-marking. And because KIMPAK is not a waste material, but comes in rolls or sheets, it can be "tailored" to meet your particular requirements.

Try KIMPAK soon—for any of the Four Basic Methods of Interior Packaging: Bracing and Blocking, Flotation, Surface Protection, Absorbent Packaging. For further information, see your nearest KIMPAK distributor listed in classified telephone directories under "Packing Materials" or "Packing Materials—Shipping"; or write to Kimberly-Clark Corporation, Neenah, Wisconsin.



1. Pre-cut blanket of KIMPAK is laid over entire top of table.

2. KIMPAK blanket firmly taped in place protects all edges and corners of top.

3. Without further packaging protection, table is now ready for truck shipment to any part of the country.

Dining table illustrated is a product of the Rway Furniture Company, Sheboygan, Wisconsin.

FREE BOOKLET!

KIMBERLY-CLARK CORPORATION
Neenah, Wisconsin MP-851
Please send me free, the illustrated KIMPAK booklet, "Float Packaging."

Name .....

Address .....

City, Zone, State .....

Kimpak
REG. U.S. PAT. OFF. & FOREIGN COUNTRIES

A PRODUCT OF Kimberly Clark RESEARCH

CREPED WADDING

*T. M. REG. U. S. PAT. OFF. & FOREIGN COUNTRIES

ARMY
NAVY
AIR
FORCE

PACKAGING
TO
MILITARY
SPECIFICATION

Bags
Blankets
Moisture-vaporproof barriers
L-2 Case Liners
Greaseproof Papers

Recognized converters of approved government specification materials

Benefit from our World War II and Post War experience. Approved suppliers of packaging materials under following military specifications:

JAN-P-117	AN-B-20
JAN-P-131	MIL-E-6060
JAN-P-125	MIL-E-6056

Write or phone for samples, prices and information

★

AGENTS WANTED FOR SEVERAL TERRITORIES
WRITE FOR DETAILS

★

UNITED MINERAL & CHEMICAL CORP.

PACKAGING DIVISION
16 HUDSON ST. • NEW YORK 13, N. Y.
BEekman 3-8870

U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Edited by H. A. Levey

Bagging Machine with Feed and Feed Cut-Off Operated by Motor-Driven and Brake-Retarded Receptacle Support, P. J. Soulen (to Pal-O-Pak Insulation Co., Inc., Hartland, Wis.). U.S. 2,553,684, May 22. A bulk material bagging system comprising a stationary cylindrical feed spout inclined downwardly toward its outlet end and a slight angle relative to the horizontal and having a diameter adapted for snug sliding coaction with the interiors of the successive empty bags applied thereto with the bag bottoms spanning said outlet end.

Machine for Setting up Corner-Locking Trays, R. E. Acker (to Container Corp. of America, Chicago, Ill.). U.S. 2,553,733, May 22. In a machine for setting up a rectangular container from a flat paperboard blank having a bottom panel and contiguous end and side walls, the end walls having contiguous locking tabs at the corners between the same and the side walls, machine having folding elements at corners which engages locking tabs and end flaps, each folding element having a projection at its inner side positioned in a plane parallel to the adjacent side of throat and spaced inwardly therefrom to engage the adjacent locking tab.

Machine for Covering Knocked-Down Cartons, S. Bergstein, Cincinnati, Ohio. U.S. 2,553,740, May 22. In a machine, a pair of rolls juxtaposed and forming a pinch, means to feed a sheet of material to a position in a plane adjacent to said rolls and substantially parallel with the plane containing the axes of said rolls, and means for feeding a tubed carton into the pinch of rolls through the plane occupied by said sheet whereby to carry said sheet through the pinch of rolls and wrap it about side portions of tubed carton.

Carton, J. A. Zinn, Jr., Chicago, Ill. U.S. 2,553,803, May 22. A carton having a first panel, a second panel, a third panel, a fourth panel and a connector section, connector section being adhesively secured to first panel, first and third panels having tabs swingingly united thereto at the tops thereof; second, fourth and connector having tabs swingingly connected thereto at the tops thereof.

Carton Having End Closures of Substantially Uniform Thickness, J. A. Zinn, Jr., Chicago, Ill. U.S. 2,553,804, May 22. A blank for a carton which includes five panels, one panel being adapted to be secured flatwise against another panel to form a tube of rectangular cross section.

Pressure-Sensitive Adhesive and Adhesive Tape, C. J. Ebel (to Minnesota Mining & Mfg. Co., St. Paul, Minn.). U.S. 2,553,816, May 22. A pressure-sensitive adhesive tape wound upon itself in roll form, comprising a flexible backing and, as a coating thereon, a normal tacky and pressure-sensitive adhesive composition.

Bendable Clip Box Lock, M. C. Andre (to Gaylord Container Corp., St. Louis, Mo.). U.S. 2,553,840, May 22. The combination in a box of a bottom member having an upright side wall folded inwardly along its top edge to form a downturned inside flap, a top member provided with a bounding flange to overlie side wall when the box members are in closed relation, a fastener clip for detachably interlocking box members and comprising a strip of pliable metal formed into a pair of opposed legs of unequal length and joined together at one end.

Box Blank and Box, R. A. Samsing (to Associated Folding Box Co., South Boston, Mass.). U.S. 2,553,870, May 22. A box blank comprising a sheet of paperboard creased to provide bottom, side and end-wall panels, each end-wall panel being integral with and extending outwardly beyond an end of the bottom-wall panel and each having a tab integral with the end-wall panel and extending beyond a crease line across the junction of tab and panel.

Wrapping Machine, O. Sandberg (to Lynch Corp., Anderson, Ind.). U.S. 2,553,871, May 22. A wrapping machine comprising a feed conveyor for articles to be wrapped, which articles comprise a plurality of individual pieces disposed in face-to-face-relationship, elevator means for raising the article from the feed conveyor and means for raising and lowering the elevator means, a table which is adapted to receive a wrapper of sheet material being above the opening.

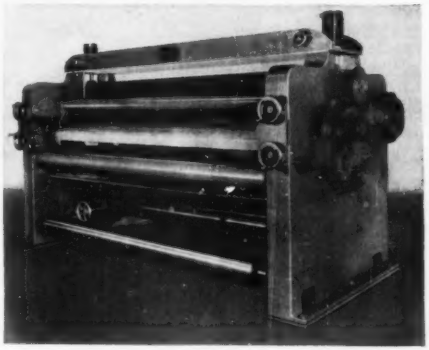
Machine for Forming Package Wrappers Provided with a Tearing Strip, E. L. Smith, N. W. Lyon and C. F. Prince (to Package Machinery Co., Springfield, Mass.). U.S. 2,553,877, May 22. In a machine for forming a wrapper provided with a tearing strip, means for continuously advancing webs of wrapper material and tearing strip material, means included opposed rotatable drums.

Convertible Container and Serving Device, R. G. Stigler (to Standard Molding Corp., Dayton, Ohio). U.S. 2,553,880, May 22. A convertible container and serving device comprising a main body having at least one article-receiving compartment, body including a hollow boss located centrally thereof and open at both ends.

Wrapping Paper Comprising Single-Face Corrugated Board and Integral Fly Webs, R. E. Lambert, Fort Wayne, Ind. U.S. 2,553,923, May 22. A cylindrical roll of wrapping material, said roll having a uniform number of plies substantially throughout its length and width and comprising a corrugated protective strip and a backing web adhesively connected therewith and having free fly-sheet margins folded directly on backing web.

Mechanism and Method for Making

ARM FOR ACTION with *DILTS* big production guns



MACHINERY FOR

COATING • LAMINATING
CREPING • WAXING
ASPHALTING

Ready for Action...

THE CONTRACOATER

FOR COATING LACQUERS, RESINS, ORGANISOLS, PLASTISOLS ON PAPER, FOIL, FABRIC AND FILM.

KOHLER SYSTEM EQUIPMENT
PRODUCT OF DILTS

DILTS MACHINE WORKS
FULTON, NEW YORK
DIVISION OF
THE BLACK-CLAWSON CO., Hamilton, Ohio

"RED" *sez:*

There is no better closure method than gummed tape. There is no better gummed tape than *REDCORE.*

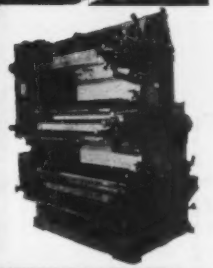
Rexford PAPER COMPANY
MILWAUKEE 3, WIS.

SAVE 50% PRODUCTION COST

ANILOX PRESSES 2, 3, 4 COLOR

MANHASSET *Does the Job Right!*

MEETS ALL REQUIREMENTS
GIVES UTMOST PRODUCTION
HANDLES VARIETY OF STOCK
SKILLFULLY DESIGNED
CARRIES THE LOAD
MANY SATISFIED USERS



© I. C. Corp.

MANHASSET MACHINE CO.
MINEOLA, N. Y. • Garden City 7-7560

See What They're Packing in

HOWARD-SEAL

Controlled Polyethylene

PLASTIC BAGS

ICE CUBES

—and scores of other perishable items!

Just think what it could do for *YOUR* product!

- **Moisture-Proof**
- **Fracture-Proof**
- **Unaffected by temperature changes**

Don't confuse Howard-Seal with any other film. Howard-Seal is controlled as to uniformity of thickness, size, and sealability.

Sold by leading paper distributors

Photo of Ice Cubes packaged in HOWARD-SEAL Plastic Bag

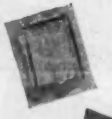
WRITE FOR FULL INFORMATION AND LOW PRICES

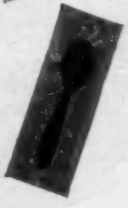
HOWARD PLASTICS

Dept. 9, Council Bluffs, Iowa, or Kansas City, 8, Missouri

In CANADA: Parent Paper Prod., 5565 Cote St. Paul Rd., Montreal Que.

WRAP-ADE'S GONE MILITARY!





Automatic Candy Pop WRAPPING MACHINE

Can be converted to UNIT PACKAGER For High Speed MILITARY PACKAGING JOBS

COMPARE THESE EXCLUSIVE WRAP-ADE FEATURES:

- Changes on feeding mechanisms convert machine to Unit Packager. Completely heat seals such small items as nuts and bolts, spoons, hard candies, etc.
- Uses 50 per cent less Cellophane.
- Simple in construction and operation.
- SPEED — 150 units per minute—or even higher speeds for small items. For some products, an automatic magazine is available for more economical production.

Write today for full information on this and other WRAP-ADE Packaging Machinery.

wrap-ade

MACHINE CO., INC.

83 VALLEY STREET, BELLEVILLE 9, NEW JERSEY

PHONE—BELLEVILLE 2-6150-1

U. S. patents digest

Boxes with Attached Handles and the Like. S. Bergstein, Cincinnati, Ohio. U.S. 2,554,004, May 22. A method of securing an auxiliary member to a box blank which comprises continuously moving said box blank in a planar path of travel.

Package with Improved Tear Tape, D. R. Burton (to Wingfoot Corp., Akron, Ohio.). U.S. 2,554,137, May 22. In combination and as a part of a package, a moisture-proof wrapper and outside of the wrapper a tear tape encircling the package; a narrow, longitudinal area of the tear tape spaced inwardly from each edge and being united to a narrow area of the wrapping material.

Container, F. D. Jones, T. O. Welindt, L. C. Garrett and G. B. Hill (to Deere Mfg. Co., a corporation of Iowa). U.S. 2,554,531, May 29. In combination, a container comprising a plurality of staggered overlapping compartments, a support for container, an upstanding lug on support and means for mounting said container on support including a tie rod.

Display Carton, R. J. Hennessey (to Waldorf Paper Products Co., St. Paul, Minn.). U.S. 2,554,190, May 22. A carton in combination with a recessed-end can, said can having peripheral projecting flanges encircling its ends, the carton including walls for partially enclosing the can, two of said walls being in substantially parallel relationship.

Package, J. E. Snyder (to Wingfoot Corp., Akron, Ohio). U.S. 2,554,157, May 22. An empty and open double-walled bag, each wall being composed of different wrapping materials, the respective materials being homo-heat-sealable, but not hetero-heat-sealable, and at end of the seam leading to the mouth of bag a heat-sealed area of the outer wrapping material protruding beyond the seam.

Cellular Carton, M. Burger (to Shellmar Products Corp., Chicago, Ill.). U.S. 2,554,613, May 29. A carton comprising front and rear side walls, a bottom connecting the same and a multi-ply longitudinal partition subdividing the space between said wall into parallel rows.

Foldable Box, L. C. Michetti (to Andre Paper Box Co., San Francisco, Calif.). U.S. 2,554,677, May 29. A folding box formed from a blank of semi-rigid sheet material folded along parallel crease lines to provide four lateral side walls, side walls being secured together for folding flat with two pairs thereof in opposed relation and for outfolding to open rectangular position.

Method of Forming Cylindrical Containers, H. F. Waters, New York, N. Y. U.S. 2,554,722, May 29. The method of manufacturing a cylindrical fluted ply container structure consisting of the steps of: shaping a fluted plural ply member into cylindrical formation, applying adhesive to the interior surface of cylindrical formation, inserting a third ply into structure and exerting sufficient pressure against third ply to cause same to press

HELPFUL FREE LITERATURE

EQUIPMENT • SUPPLIES • SERVICE

The literature and samples described here contain valuable data that will help increase the operating efficiency of your business.

After selecting the items you want, merely circle the corresponding numbers on the post card, fill in the information requested, and mail.

SHOCK-ABSORBENT PACKAGING. Profusely illustrated booklet shows how to employ Kimpak creped wadding as protective inner packaging for pharmaceuticals, fragile products, machinery, etc. Kimberly-Clark Corp. **(8-900)**

LABELING MACHINE FOR PACKAGE TOPS. Folder describes functions of combination top labeler and imprinter that applies thermoplastic roll labels to tops of packages. Includes specifications and suggested uses. American Machine and Foundry Co. **(8-901)**

GUIDE TO CAST PLASTIC FILMS. Physical and chemical properties of six basic types of Vinylite cast plastic films are outlined in useful 16-page handbook. Bakelite Co., Div. Union Carbide and Carbon Corp. **(8-902)**

CORNER STAYERS FOR PAPER BOXES. Bulletin describes functions of two machines that form and moisten gummed stays and apply to box corners. Specifications are included. M. D. Knowlton Co. **(8-903)**

AUTOMATIC CASE IMPRINTER. Specification sheet shows how Packomatic imprinter imprints from one to eight lines on one or more sides of shipping cases. J. L. Ferguson Co. **(8-904)**

THERMAL PROCESSING OF CANNED FOODS. Twenty-six page manual gives detailed instructions for heat processing. Tells how to set up and operate complete plant. Includes numerous charts, tables, diagrams. Continental Can Co., Inc. **(8-905)**

ACETATE PACKAGING FILM. Brochure tabulates physical, chemical, and mechanical properties of Lumarith acetate film and sheeting. Extensive pictorial section depicts range of applications. Celanese Corp. of America. **(8-906)**

STYLES IN BOTTLES. Handy pocket size catalog pictures full range of bottle styles and shapes obtainable from this manufacturer. Contains complete details on sizes and finishes. Maryland Glass Corp. **(8-907)**

RUST PREVENTATIVES. Easy-to-read wall chart gives uses, methods of application and physical properties of fifteen rust preventative oils and compounds conforming to Federal specifications. Price list included. E. W. Twitchell Inc. **(8-908)**

PAPER COATINGS AND FINISHES. Specification sheet lists applications, physical and chemical properties of three new water-soluble resins for paper coating. American Polymer Corp. **(8-909)**

PACKAGING DISPLAY SELECTOR. Thirty-six page handbook tells how to select point-of-purchase displays for a wide variety of consumer products. Profusely illustrated. The Hinde and Dauch Paper Co. **(8-910)**

PACKAGE CUSHIONING. Comprehensive manual describes and compares eight varieties of sponge rubber shock-absorbent interior packaging materials. Includes helpful selection chart and tabulation of physical and chemical properties. The Sponge Rubber Products Co. **(8-911)**

CONVEYOR BELTS. Loose-leaf catalog section gives details of seven types of conveyor and elevator belts and splices. Contains construction details and recommended applications. B. F. Goodrich Co. **(8-912)**

PAPER BOARD ADHESIVE. Bulletin tells how to select the proper resin and prepare efficient adhesive formulae for making corrugated board. Correct methods of application are included. The Borden Co. **(8-913)**

ROTARY BAG SEALERS. Three high speed automatic rotary adhesive sealing machines for bags and envelopes are described in brochure that includes operational details, specifications, and output rates. Amsco Packaging Machinery, Inc. **(8-914)**

VEGETABLE PARCHMENT PAPER. Informative booklet gives background information about this high-wet-strength and grease-resisting packaging material. Covers method of manufacture, physical properties, and recommended applications in the packaging of foods, drugs, and other products. Paterson Parchment Paper Co. **(8-915)**

CELLOPHANE PRINTER. Features and advantages of new 30" rotary cellophane printing press are described in bulletin that includes diagram and photographs. Kidder Press Co., Inc. **(8-916)**

COLLAPSIBLE TUBE FILLER. Data sheet gives dimensions, specifications, and capacities of two piston-type tube fillers and of two kinds of tube closing machines. Perl Machine Manufacturing Co. **(8-917)**

COOLING AND PASTEURIZING UNIT FOR JARS. Operation of triple-purpose unit that pasteurizes, holds, and cools products packaged in jars, bottles, or cans is fully described and pictured in brochure that includes flow chart and specification data. Island Equipment Corp. **(8-918)**

PAPER CONVERTING EQUIPMENT. Brochure outlines this firm's complete line of machinery for laminating, waxing, winding, unwinding, embossing, and coating paper, foils, and film. Dilts Machine Works, Div. The Black-Clawson Co. **(8-919)**

TAPE PRINTER. Compact new multi-purpose press that imprints on pressure-sensitive or gummed tape in widths up to 2" is fully described in 4-page folder. Markem Machine Co. **(8-920)**

BARRIER MATERIALS. Catalog of government approved barrier materials for military packaging. Contains actual samples of numerous multi-layer laminates of paper, foil, and film. Gives application data and specifications for each. Reynolds Metals Co. **(8-921)**

Fill out and mail this card now

MODERN PACKAGING

Manufacturers' Literature Service

I am interested in the following items:

8-900	8-901	8-902	8-903	8-904	8-905	8-906	8-907	8-908	8-909	8-910
8-911	8-912	8-913	8-914	8-915	8-916	8-917	8-918	8-919	8-920	8-921
8-922	8-923	8-924	8-925	8-926	8-927	8-928	8-929	8-930	8-931	8-932
8-933	8-934	8-935	8-936	8-937	8-938	8-939	8-940	8-941	8-942	8-943

If you do not now subscribe to MODERN PACKAGING, but wish to receive the next 12 issues ($5 everywhere), just check here ☐

NAME .....**POSITION**.....

(Please Print Plainly)

COMPANY .....

STREET .....**CITY**.....**STATE**.....

(Not valid after November 15, 1951)

HELPFUL FREE LITERATURE

EQUIPMENT • SUPPLIES • SERVICE

The literature and samples described here contain valuable data that will help increase the operating efficiency of your business.

After selecting the items you want, merely circle the corresponding numbers on the post card, fill in the information requested, and mail.

HEAT SEALERS. Data on three types of band sealers for all types of thermoplastic packaging materials are provided in illustrated booklet. Sav-Way Sara Seal, Inc. **(8-922)**

MILITARY PACKAGING. Loose-leaf catalog contains samples of government approved barrier materials for military packaging. Contains prices, test data and construction details. Acme Backing Corp. **(8-923)**

PRODUCTION TABLES. Leaflet provides tables which tell rotogravure press production in terms of impressions per hour from engraved cylinders of various circumferences. American Type Founders. **(8-924)**

JAR AND BOTTLE CAPS. Closures for vacuum sealing, hot packing, sterilizing and processing of food and drug products are described in catalog that also gives data on Anchor capping and sealing equipment. Anchor Hocking Glass Corp. **(8-925)**

PACKAGING MATERIALS. Brochure illustrating and describing in 16 pages, bags, canvas products, thread and twine, and other products and special services made available through the Bemis Brothers Bag Co. **(8-926)**

HYDROTONE INK COLOR SELECTOR. Selector shows 30 different standard ink colors, and dozens of color combinations for printing kraft, tissue, or other absorbent stocks. Bensing Brothers and Deeney. **(8-927)**

AUTOMATIC COUNTING. Bulletin giving information on the automatic filling by count, in paper packets, of small screws and nails. Illustrated. Brown Bag Filling Machine Co., Inc. **(8-928)**

TRANSPARENT PLASTIC VIALS. Sales advantages of rigid, transparent plastic vials and tubes in the packaging of pharmaceuticals and cosmetics are reviewed in a brochure that also describes available types and sizes. Celluplastic Corp. **(8-929)**

PRINTING. Plastic bound book of 76 pages demonstrating Kromekote, Champion's cast coated paper. Includes letterpress and offset printing in both black and white and multi-color. The Champion Paper and Fibre Co. **(8-930)**

CONTAINER PLUGS, SLEEVES AND CAPS. Illustrations and dimensions of various container plugs, sleeves and caps that give protection against dust and dirt and damage in spraying, are given in this 4-page bulletin. Cleveland Container Corp. **(8-931)**

BAG LOADER. Prices, illustrations, etc., of the new Clamco bag loader provided. Also included is information on the scale bracket and small filling head. Cleveland Lathe & Machine Co. **(8-932)**

PAPER BAG FILLING AND SEALING. Illustrations and description of a line of bag closing machines designed for automatically feeding, opening, filling, and sealing consumer sizes of paper bags within a range of ⅜ to 10 pounds. Consolidated Packaging Machinery Corp. **(8-933)**

DESIGN FOR SHIPPING CONTAINERS. Presented are some thoughts for shipping container design for two colors, identification, consumer appeal, advertising, reuse, solid fibre, efficient production, association, and display. 12 pages illustrated in color. Container Corp of America. **(8-934)**

AUTOMATIC CARTONING MACHINE. Two color brochure on CECO model 45, a completely automatic packaging machine which performs each and every operation from start to finish. Container Equipment Corp. **(8-935)**

PACKAGING ADHESIVES. The chemical properties, general characteristics, and suggested end uses for over seventy special purpose packaging adhesives are included in this booklet. Corn Belt Adhesives. **(8-936)**

PROMOTIONAL IDEAS FOR ANNIVERSARIES. Specially printed tags, labels, stickers, letterheads, and other useful promotional devices for capitalizing on a company's anniversary are covered in this booklet. 16 pages. Dennison Manufacturing Co. **(8-937)**

METALAM PACKAGING MATERIAL. Ten page brochure describes a laminated combination of foil, film, coating and other materials. Shows its use in the packaging field and presents actual samples. The Dobeckmun Co. **(8-938)**

ROTARY HEAT SEALER. Folder discussing the Doughboy rotary heat sealer and devices used in conjunction with it for coding and hole punching bags as well as the compression unit for compression sealing. 4 pages. Illustrated. Doughboy Industries, Inc. **(8-939)**

HINTS ON CELLOPHANE. One dozen valuable suggestions to help users obtain fullest value from cellophane wraps. Supplement includes data on the effect of product moisture and relative humidity. E. I. du Pont de Nemours & Co., Inc. **(8-940)**

DUREZ. Various forms, means of production, uses, methods of molding, design suggestions, and finishing data regarding Durez phenolic resins and molding compounds is presented. A tabulation of the physical properties of this material is included. Durez Plastics & Chemicals, Inc. **(8-941)**

PROPERTIES OF KODAPAK SHEET. A 24-page booklet describing the various formulations of Kodapak sheet and giving a complete technical description together with a detailed summary of performance tests. Eastman Kodak Co. **(8-942)**

SEMI-AUTOMATIC LABELER. Detailed discussion of the Model S semi-automatic World labeler, an unusually flexible labeler. Illustrations and some specifications are included. 4 pages. Economic Machinery Co. **(8-943)**

Fill out and mail this card now

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

First Class Permit No. 2656 (Sec. 34.9, P. L. & R.), New York, N. Y.

MODERN PACKAGING

575 Madison Avenue

NEW YORK 22, N. Y.

U. S. patents digest

against fluted ply without deforming said fluted ply.

Container, M. C. Fox and C. C. Howes (to The Davison Chemical Corp., Baltimore, Md.). U.S. 2,555,031, May 29. A container for the storage and shipment of phosphatic fertilizers, container comprising a multi-layered bag of kraft paper or the like, a strongly adherent coating of a homogeneous mixture of lime and starch on inner surface of innermost layer, starch bonding coating to the paper and extending through the lime to form a strong coating, which neutralizes materials destructive to the paper.

Method of Producing Containers, J. P. Carroll (to American Can Co., New York, N. Y.). U.S. 2,555,315, June 5. A method of producing a liquid-retaining fibre container of flexible material having a tubular body and bellows-type end.

Integral Hinge for Sheet-Metal Containers, J. F. Peters and H. W. Jones (to American Can Co., New York, N. Y.). U.S. 2,555,366, June 5. A sheet-metal container comprising a tubular body terminating at its upper end in an inwardly turned peripheral flat hem to provide a smooth cover seat and provided with container cover having a depending peripheral flange having a curved hinge lug.

Hinged Container, C. U. Deaton (to McStay Jackson Co., Chicago., Ill.). U.S. 2,555,473, June 5. A container comprising relatively shallow complementary container sections generally rectangular in shape, a separable hinge construction along each side of container, hinge construction comprising complementary interengaging members integral with each container section.

Carton Closure, R. M. Dunning (to Waldorf Paper Products Co., St. Paul, Minn.). U.S. 2,555,581, June 5. A carton structure including a series of foldably connected wall panels and a supporting flap structure secured to two opposed ends of said panels, flap structure including an outer and inner ply foldably connected.

Packaging Method, B. A. Fairbank (to Dewey & Almy Chemical Co., North Cambridge, Mass.). U.S. 2,555,584, June 5. The method of packaging irregularly shaped pieces of foodstuff, and of producing uniform packages thereof which includes arranging the pieces in a rigid supporting structure having the desired dimensions, drawing an impermeable, flexible envelope over the structure and expelling the envelope with the pieces contained therein from the structure.

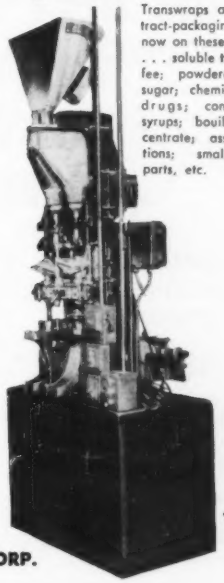
Method of Packaging, B. A. Fairbank (to Dewey & Almy Chemical Co., North Cambridge, Mass.). U.S. 2,555,585, June 5. The method of packaging filleted fish in impermeable envelopes and of producing uniform packages thereof suitable for quick freezing which consists in arranging the fish in a rigid structure, removing one wall of the structure, placing the structure in a rotatable fixture with open end of the structure directed away from

POWDERS TABLETS FREE FLOWING SOLIDS LIQUIDS OR SEMI-LIQUIDS

Cut Costs 5 ways on TRANSWRAP

MILITARY PACKAGING

1.—Cut labor costs
2.—Improves package
3.—Eliminates purchase of ready-made bags
4.—High-speed production
5.—Versatile



Transwraps are "contract-packaging" right now on these products . . . soluble tea & coffee; powdered milk; sugar; chemicals and drugs; concentrated syrups; bouillon concentrate; assault rations; small metal parts, etc.

Military packaging calls for rigid observance of delivery dates—and exacting package specifications. You can't afford to overlook slipshod methods and worn-out or inadequate equipment.

Now, as all during the past war, more Transwraps are beating delivery dates and cutting costs than any other automatic packaging machine. More—because experienced packagers know that Transwraps are dependable for continuous, cost-cutting production under *all* conditions.

TRANSPARENT-WRAP MACHINE CORP.
Hasbrouck Heights, New Jersey

Tell us your product—and packaging material . . . we'll give you specific data on how you can meet your contract—at lower costs!

Write for free 8-pg brochure

TRANSPARENT-WRAP MACHINE CORP.
142 Rt. 17, Hasbrouck Heights, N. J.

☐ Please send your free 8-page brochure
☐ Have one of your sales engineers contact me—rush!
☐ Furnish delivery and installation data, with terms

Name ..... Title .....
Company .....
Address .....
City ..... Prov. .....

Don't Get "STUCK" With A Poor Product!

CORN BELT ADHESIVES ARE ENGINEERED

We specialize in ALL industrial glues:

- Phenolic Resins
- Urea-Formaldehyde Resins
- Liquid and Dry Caseins
- Resin-Latex Combinations
- Polyvinyl-Acetate Emulsions
- Hot Melts and Thermoplastic Pick-Up Gums
- Dextrine, Starch, and Tapioca Adhesives
- Flexible Animal Glues

Now you can buy the PERFECT glue . . . engineered to meet *your* specific needs!

Our experienced Chemical Engineers study your operations and analyze your requirements. Then they prescribe the EXACT adhesive to do the job, and test it on your equipment and materials.

Corn Belt's "Engineered Adhesives" save thousands of dollars for hundreds of satisfied customers. May we prove that this extra service means extra profits for YOU?

Write *today* for free booklet.

CORN BELT ADHESIVES
COUNCIL BLUFFS, IOWA

Neomax CARTON TUCKER

FAST!
EFFICIENT!
VERSATILE!
SAVES MONEY!

The Neomax Carton Tucker can put your cartoning on a profitable basis. It reduces costly handling to a minimum. With it, one operator can end tuck and close as many cartons as three formerly did.

Suitable for anything that's packaged in tuck end cartons. Production: 25-35 cartons per minute. Fast changeovers. Compact. Portable. Low cost.

Get details today. Write.

designed and built by **ENGINEERING DIV., BRISTOL-MYERS CO.**

William B. Sanford, Inc.
601 W. 26th ST., NEW YORK 1, N. Y.

U. S. patents digest

fixture, sliding an impermeable bag over both fixture and supporting structure and, by rotating, releasing the package after sealing.

Adhesive Tapes and Sheets, J. E. A. Hopkins, C. E. Frick and P. Van Cleef (to Van Cleef Bros., Inc., Chicago, Ill.) U.S. 2,555,745, June 5. Pressure-sensitive adhesive tapes or sheets comprising a flexible backing film consisting mainly of polymerized vinyl chloride, a bonding coat comprising a polymerized diene elastomer and methylene-bis-(4-phenyl isocyanate) and a pressure-sensitive adhesive layer comprising rubber and resinous material.

Pour-Seal Structure for Cartons, J. A. Zinn, Jr., Chicago, Ill. U.S. 2,555,526, June 5. A pour-seal structure for a carton having a bellows-type top closure wherein one body panel of carton and the top closure panel hinged thereto are of two-ply construction.

Packaging Machine, G. H. Rhodes and R. C. Lang (to National Biscuit Co., New York, N.Y.). U.S. 2,555,816, June 5. The combination of a continuously driven conveyor adapted to carry a continuous stack of articles, a second conveyor in alignment with first conveyor, continuously operating means for measuring off unit quantities of articles.

Collapsible Cellular Carton, W. H. Inman (to Bloomer Bros. Co., Newark, N. Y.). U.S. 2,556,088, June 5. A cellular carton in collapsed form made of foldable blank material comprising longitudinally extending, transversely spaced side walls, a bottom wall foldable about the longitudinal center line thereof and having its side edges foldably connected with the bottom edges of side walls and having a transverse partition wall foldable about the longitudinal center line thereof, and cut and scored to form a series of longitudinally spaced, transverse partitions with triangular gussets foldably connected with the ends.

Filling Machine, J. P. Jakob (to American Can Co., New York, N. Y.) U.S. 2,556,188, June 12. In a machine for assembling articles such as cans or the like into stacked formation for filling into bags or other containers, the combination of spaced tracks for receiving rows of cans and for supporting the cans to form a layer and means for pushing rows and layers of cans into an opened bag.

Counting, Stacking and Packing Machine, R. K. Pottle (to American Can Co., New York, N. Y.). U.S. 2,556,214, June 12. In a machine for counting, stacking and packing flat articles, the combination of a pair of vertically disposed rotatable stacking worms for receiving articles and for elevating them into a vertical stack, support fingers disposed adjacent stacking worms for receiving the articles from worms and supporting stack as it builds.

Liner and Receptacle, H. R. Denton (to Moist-R-Proof Container Co., San Francisco, Calif.). U.S. 2,556,321, June 12. In combination with a rectangular four-

CONTROLLED:

High speed PM 8 filler. Design shown for coffee can filling at 100 per minute at low initial cost. Semi bulk and dribble aluminum weigher with 50% fewer parts for unexcelled accuracy. Available in smaller designs or for jars and cartons.

Ask for Catalog 48

WEIGH RIGHT Packaging Machinery

WEIGH RIGHT AUTOMATIC SCALE COMPANY

JOLIET • ILLINOIS • U. S. A.

LABEL SEAL-IT

Simplifies Bag Sealing and Labeling!

SEALS & LABELS IN ONE EASY OPERATION!

No staples, no pins, no hand work!

Simultaneously attaches labels and heat seals all suitable bag materials up to 6" wide; also seals to 10" wide. Cuts handling time; saves labor; **pays for itself in 6 months!** Insures tight pack even with oversize bags by folding tops first, if desired. Fast, safe operation with automatic Phantom Feed. Other Heat Seal-It Machines available. Write for circulars.

GLOBE PRODUCTS-HEAT SEAL CORP.
3372 Robertson Blvd., Los Angeles 34, California

HEAT SEAL-IT Machines

. . . a perfect packaging job!

REET*

1.7, 2 and 2.5 GAUGE
calendered **VINYL FILMS**
in **non-toxic**, general purpose and special formulations.

If it's REET it's right!*

ROSS & ROBERTS, Inc.

Stratford, Conn. West Haven, Conn.

ROSS & ROBERTS SALES CO., INC.
Sales and Technical Field Representatives
350 Fifth Avenue, New York 1 • BRyant 9-7961

*Trade Mark

3 Reasons why

SEAL-SPOUTS*

MAKE BETTER PACKAGES

1 EASIER POURING of free-flowing products.

*Seal-Spouts are metal pouring spouts attachable to any type package.

2 EASIER TO OPEN
Eliminates tearing package tops, cutting with a knife, messy torn packages.

3 EASIER TO CLOSE
Remains tightly closed as a protection against infestation and spillage.

Add these three advantages to your packages. Apply SEAL-SPOUTS *right in your production line.*

Your Inquiry Is Invited

*T.M. Reg. U.S. Pat. Off.

SEAL-SPOUT CORPORATION
363 Jelliff Ave., Newark 8, N. J.

U.S. patents digest

sided receptacle of semi-rigid material, a rectangular four-sided collar within receptacle support by and against the sides in expanded position against collapse, said collar being formed with folding creases.

Collapsible Paperboard Bottle Carrier, W. A. Ringler (to The Gardner Board & Carton Co., a corporation of Ohio). U.S. 2,556,341, June 12. In a bottle carrier including a body having end walls for surrounding an assembly of bottles, a central longitudinal partition terminating substantially in the plane of the top edges of side and end walls, lateral partition elements extending between side walls and central longitudinal partition and equipped with wire handle having reversely bent legs.

Shipping Carton for Glass, J. A. Farrell (to Cadillac Products, Inc., Detroit, Mich.). U.S. 2,556,529, June 12. A shipping carton for frangible panes of glass and the like comprising, in combination, a rectangularly shaped carton of fibreboard material and a yielding pad for each inner corner of the carton composed of a multiplicity of corrugated fibreboard sheets.

Convertible Shipping Carton and Self-Feeder, W. C. Rendall and F. L. Rushing (to Gaylord Container Corp., St. Louis, Mo.). U.S. 2,556,661, June 12. A convertible shipping carton and self-feeder comprising two integrally connected angularly disposed walls, one wall forming the bottom of carton in the feeding position thereof and the other wall extending upwardly in such position of carton and forming one side wall thereof.

Container and Closure Construction, C. D. Magnesen, Chicago, Ill. U.S. 2,556,765, June 12. A container and closure for paint or similar substances, container having a cylindrical top of a diameter smaller than the diameter of the container, with tapered throat in top and having a groove about the neck.

Collapsible Carrier with Means for Maintaining Expanded Condition, W. A. Ringler (to The Gardner Board & Carton Co., a corporation of Ohio). U.S. 2,556,778, June 12. In a paperboard bottle carrier, a central longitudinal partition, bottom members extending, respectively, between side walls and partition members and lateral partitions extending in a direction transverse the side walls.

Reinforced Carton, R. Guyer (to Waldorf Paper Products Co., St. Paul, Minn.). U.S. 2,556,915, June 12. A carton comprising a series of panels foldably connected together, the end panels of the series being arranged in overlapping relation and adhered together to form a double thickness.

Box-Type Hinge, L. H. Haase, (to Kent Plastics Corp., Evansville, Ind.). U.S. 2,557,048, June 12. In a box structure having a box member and a cover member, the combination therewith of a hinge pin and a pin enveloping spring, one of said members having a tongue projecting toward the other.

Neutraglas containers are indifferent to contents, detergents and time itself!

NEUTRAGLAS CONTAINERS...

stubbornly protect the purity of whatever they contain

No matter how you wash them . . . how you sterilize them . . . what you put in them . . . or how long you leave it there —Neutraglas containers remain serenely indifferent to their contents.

Neutraglas ampuls and serum bottles are made of a special Kimble borosilicate glass . . . the most resistant glass practicable to mold.

Use Neutraglas containers for protecting solutions that require the utmost in purity and consistent potency. Particularly indicated for parenteral solutions. For complete information and prices, please write:

KIMBLE GLASS TOLEDO 1, OHIO
Division of Owens-Illinois Glass Company

Many of America's Biggest Bakers Buy Package Wraps from Printers Who Use SGS-produced Cylinders!

Tremendous quantities of some of the nation's best-known crackers, cookies and baked goods are sold each day. To print the millions of identifying wraps needed demands superbly etched gravure cylinders which will reproduce well on the longest possible runs. To meet these requirements, more and more of America's big printers are having their cylinders completely SGS-prepared.

SGS Delivers Completed Cylinders 3 Weeks After Order is Received

SGS is a fast, quality service. Every size cylinder and every process, including chrome plating, averages only 3 weeks to prepare and deliver. The reason: every operation in preparing cylinders for use on *any* printable stock specified is controlled and accomplished by SGS in its own plant. For details on rapid, complete, SGS quality gravure cylinder service, write us TODAY!

Licensed to use the Dultgen Process.

(SGS are not printers and have no financial interest in any printing firm.)

SOUTHERN GRAVURE SERVICE
Complete Gravure Cylinder Service
301 WEST MAIN STREET • LOUISVILLE 2, KY.

PACKOMATIC
PACKAGING MACHINERY

Save time . . . money . . . labor . . . with PACKOMATIC'S wide variety of modern packaging equipment.

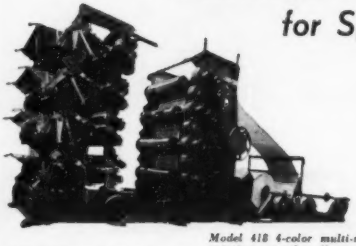
- Case Sealers
- Case Imprinters
- Carton Sealers
- Volumetric Fillers
- Net Weight Scales
- Carton Making Machines
- Dating (Coding) Devices
- Paper Can Tube Cutters, Gluers, Shrinkers, Cappers and Set-Up Conveyors

Write for complete information, today.
No obligation to purchase.

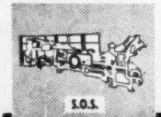
PACKOMATIC
PACKAGING MACHINERY
J. L. FERGUSON CO. JOLIET, ILL.

Chicago • New York • Boston • Baltimore • Cleveland
Denver • New Orleans • San Francisco • Los Angeles • Seattle
Portland • Tampa

POTDEVIN OIL INK PRINTING PRESSES
for Specialty Bag Papers



Model 418 4-color multi-size, oil-ink printing press for all types of coffee, flour and sugar bag papers and printed wrappings. Automatic tension control rewind insures tight, evenly wound rolls.



POTDEVIN presses are available in a wide range of types and sizes. Incorporation of supplementary units for slitting, perforating or punching, make POTDEVIN presses universally adaptable. High speed models from one to six colors for drinking cup paper; coffee, sugar, flour bag papers; cellophane; glassine; parchment, etc.

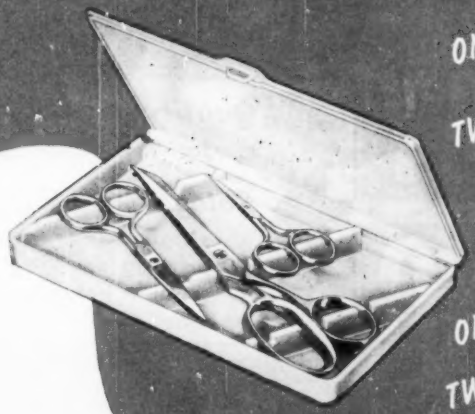
Consult our engineers on any problem. No obligation. Literature on request.

POTDEVIN MACHINE CO.
1244 38th Street Brooklyn 18, N. Y.

Designers and manufacturers since 1892 of equipment for Bag Making, Printing, Coating, Gluing and Labeling

POTDEVIN

✱ CUSTOM PLASTIC DISPLAY CASES



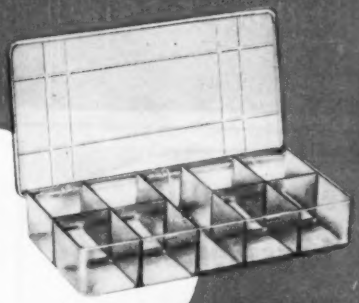
ONE A plastic package that is more than a container—actually a display case.

TWO Not only adds sales appeal but protects and provides a beautiful permanent container for the product.

✱ STANDARD PLASTIC MERCHANDISERS

ONE Same attractive qualities, yet in stock box economy.

TWO In many sizes and compartment arrangements—economical in any quantity.



Lick your Packaging Problems with a . . .

VLCHEK "One-Two"

✱ *Whatever your product—if packaged—contact us and see what our experienced designers can suggest in packages that sell.*

PLASTICS DIVISION

THE VLCHEK TOOL COMPANY

3001 East 87th Street • Cleveland 4, Ohio

SHAWRAY PRINTING

Quality Custom Printers
for the packaging trade

Rotogravure
single and multi-color printing on flat sheet and tubular polyethelene and vinyl films.

Any widths handled up to 56"
Samples and prices on request

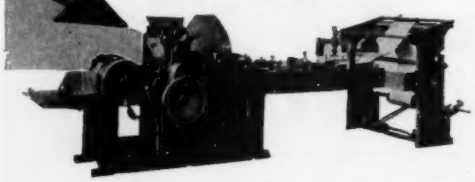
SHAWRAY PRINTING CORP. MONTGOMERYVILLE, PENNSYLVANIA

Sales Office: 398 Broadway, New York City

---

over 400,000 printed bags per day!

- Flat and Square (Gusset) Paper Bags
- Single or Double Wall (Duplex) Bags



. . . available in tube lengths ranging from 4" to 30¾" and width sizes from 2" to 19¾"

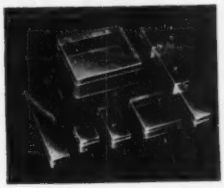
HINDE & DAUCH PAPER COMPANY SINCE 1869

Endprinter available. Universal drive instead of chains ensures perfect register.

WRITE FOR 15 REASONS WHY YOU SHOULD OWN A MATADOR

H. H. HEINRICH 200 VARICK STREET, NEW YORK, 14

Are You Packaging for the **ARMED FORCES?**



Pack in Bradley Transparent Plastic Containers —Ideal for small and extra parts, surgical and medical supplies, food, etc.

Bradley containers are made of Polystyrene—to meet government requirements—dust-proof, snug-fitting covers, transparent, large assortment of stock sizes on hand or special designs made to your specifications—protect your products completely.

Write Today advising us of your needs
Samples upon request!

BRADLEY INDUSTRIES

1654 N. Damen Avenue
Chicago 47, Illinois

Kard-O-Pak

Gives all-around Packaging Protection

Kard-O-Pak's heat-sealed plastic interliner, (Pliofilm, Polyethylene, etc.) is proof against AIR—MOISTURE—LIQUID. *It locks-in* FLAVOR—AROMA—*keeps out* undesirable moisture and odors.

You get "vacuum-pack protection" for your product at paper bag cost—and with paper bag ease of handling.

Kard-O-Pak's self-opening flat bottom STANDS UP for all automatic packing.

Kard-O-Pak

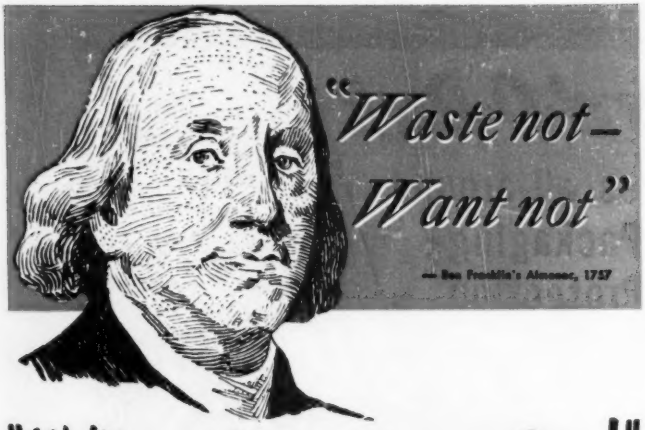
A *Flexible* CONTAINER THAT GIVES *Vacuum Pack* PROTECTION

Kard-O-Pak
Containers are now being featured by leading FOOD and SPECIALTY PRODUCTS *including*

- COFFEE
- DRIED EGGS
- MILK POWDER
- PLANT FOODS
- SOAP POWDERS

Write for Samples and Full Information

AMERICAN BAG AND PAPER CORP., Water and South Sts. • Phila. 47, Pa.



"We'll go along with you, Ben!"

...It's smart to conserve critical
PACKAGING MATERIALS

Now, more than ever, it will pay you to take special heed of your protective packaging operations and materials supply. For instance, right now the consumer and military demands for Thilco WRAP-DRI waterproof papers far exceed our available production. This popular wrap is being used to protect scarce steel, wood, plastic, and soft goods products . . . as well as for safeguarding numerous other packaging materials in critical supply such as cellophane, glassine, greaseproofs, foils, transparent films, and printed specialties from dust, dirt, temperature changes, humidity and moisture-vapor transmission spoilage.

Perhaps this pamphlet will help you

Although WRAP-DRI is in short supply, there are no shortages in our desire to help you make the most of the supply available to you. How to effect increased efficiencies and avoid waste with WRAP-DRI is yours, free for the asking, in this check-list pamphlet dealing with:

- LOADING AND STORAGE
- TEMPERATURE AND HUMIDITY
- WORKABILITY OF WRAP-DRI
- STACKING AND PILING
- DAMAGING INFLUENCES
- SCORING AND SLITTING

Here's Another Thilco Service, too —

Free Thilco Government Specifications File — a clear, concise manual of government packaging regulations, cross indexed for ready reference — yours for the asking.

Thilco protective wrapping papers include Glassines and Greaseproofs, Water-vapor Barriers, Special Treatment Papers, MG and MF Kraffs, Decorated Papers and Specialty Bags — all from one *single source* mill.

THILCO
Functional Papers

THILMANY PULP & PAPER COMPANY · KAUKAUNA · WISCONSIN

Coca-Cola

(This article continued from page 85)

Woodruff was succeeded by his son, Robert W.—a vigorous, forceful man with a touch of merchandising genius, who today is chairman of the executive committee and guiding spirit of the whole far-flung operation.

Robert Woodruff has always preached the doctrine of growth and he recognized the potentialities of the package not only for growth but for rigid control of product quality, on which he has always insisted.

Several other points of Woodruff policy are worth noting.

One is that every link in the chain of distribution must be allowed a good profit—more per unit than the company itself makes from the syrup. This is the secret of the company's high degree of loyalty and good will.

Another is that the company stays strictly out of its suppliers' business. It may spend a million dollars developing a new piece of machinery—but it has never yet manufactured a machine, a bottle, a case or a single crown cap. The company owns fewer than 50 patents—the most important of which is the bottle. It just makes Coca-Cola syrup—and bends all its efforts to helping its customers sell more drinks of Coca-Cola so that it can sell more syrup.

The chain of suppliers to The Coca-Cola Co. and its bottlers extends around the world. Bottles are made in 18 countries, crowns in 15.

In many foreign lands, Coca-Cola has been prominent for so long that it is considered indigenous. In his article "Coca-Cola: Its Fame and Fortune" in *The Reader's Digest* for June, 1947, Don Wharton tells of the German prisoner who came down a gangplank at one of our Atlantic Ports in 1943 and spotted a Coca-Cola sign. "Oh," he said to an MP, 'You have Coca-Cola here, too."

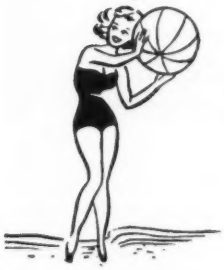
To our Armed Forces, Coke is considered a matter of logistics almost as vital as bullets and cigarets. Some five billion bottles of Coke were supplied to the military men during the war, mostly supplied from 63 Coca-Cola bottling plants that were set up by Army orders overseas. Wharton reveals that immediately after the landing in North Africa a cable came to the Army Quartermaster: SEND EIGHT COCA-COLA PLANTS IMMEDIATELY (signed) EISENHOWER.

Coca-Cola is widely regarded as

CREPE

for Packaging Protection

Reduces Packaging Costs
Easier to fold, lap and seal



Fits better On The Curves
and makes tighter corners

Has the Give to Take the Bounce
Reduces package failures

Specify **Creped**

Nylwrap
Nylcrepe
Nylfoil
Nylpak
B2 Baling
Kraft
Nylcoat

DESIGNED FOR USE
NYLCO
WHERE PROTECTION COUNTS

NYLCO PRODUCTS INC.
530 MAIN ST.
CLINTON, MASS.

Write for Free Swatch Book #211

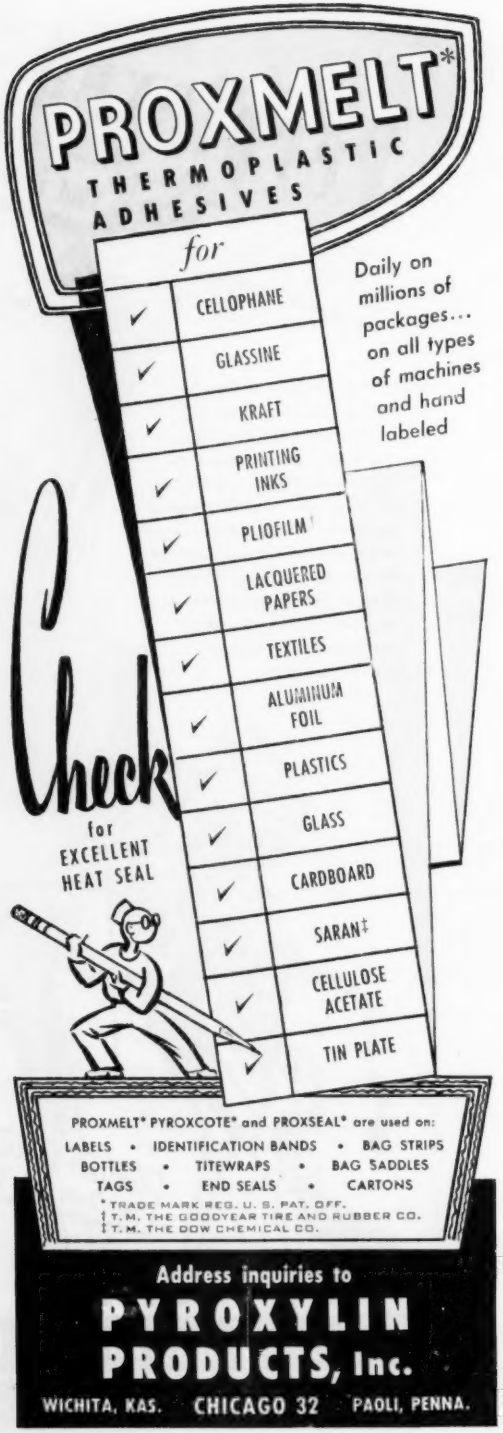
Perplexed?

Let Us Do Your Packaging!

If your products require folding cartons, cans or packets, we have the plant, equipment and personnel to do a more efficient packaging job for you. Our high-speed equipment includes every important type of automatic machine. We can also handle the shipment of your products direct to your customers. Why not write for complete details now?

THE STEVENS-WILEY MFG. CO., INC.

1605 W. GLENWOOD AVE., PHILADELPHIA 32, PA.



one of the few things that can still be purchased for a nickel. This is not universally true today. Caught in the inflationary pressures, some 37% of Coca-Cola bottlers, whose price cannot be controlled by The Coca-Cola Co., have been forced to raise their case price to dealers above the traditional 80 cents for 24 bottles—to 90 cents, $1 and as high as $1.10.

But although limited to moral suasion, Woodruff and The Coca-Cola Co. are waging a vigorous battle to hold the 5-cent retail price line. Their national advertising still features the fact that The Pause That Refreshes should be enjoyed with Coca-Cola for five cents. As a result of this discreet suasion, between 75 and 85% of all Coca-Cola is still sold to the consumer for a nickel. How long this faltering line can be held, in the face of still rising costs and the opposition of the rest of the soft-drink industry, is a question that was examined critically by *Fortune* magazine in its January, 1951, issue.

But it is safe to say that Woodruff will never depart from his belief that increased profits should come from an ever-higher volume of sales, rather than from higher price per unit.

Few companies can show anything to compare with this product's record of growth—and it is worth noting that the real growth came after the company started pushing the package. It actually has grown faster after its 50th birthday than when it was 20 or 30. It took 51 years to sell the first half-billion gallons of syrup, but only seven years for the second half-billion and now world sales amount to this much every three years; the total to date is 1.7 billion gallons. The advertising boast of "9,000,000 drinks a day" in the late 1920s pales beside today's 50,000,000.

The ingredients of this great success are clear; the ingredients of the product beyond a certain point, are one of the world's most closely guarded secrets—the secret of the taste that its hundreds of "cola" rivals have never been able exactly to imitate.

William Allen White, the late sage of Kansas, had his own definition of Coca-Cola.

When *Life* magazine sent a photographer to Emporia to take his portrait on his 70th birthday, he asked that he be allowed to pose alongside the Coca-Cola dispenser in a local emporium.

"Coca-Cola," he said, "is such a

"Perfectly Preserved"

IN KOPPERS POLYSTYRENE!

AS the preservation and storage of frozen food receive more and more attention from food processors and consumers alike, Koppers Polystyrene is assuming an increasingly important role in this field. It transmits no taste or odor to the food, keeping it pure and fresh indefinitely.

Koppers Polystyrene has been found ideal for deep freeze and refrigerator containers in a variety of shapes and sizes. Processors of cheese, peanut butter and candy have used it successfully to increase their retail sales. Clear Polystyrene containers display food perfectly, and help stimulate impulse buying. The re-use value of such containers is an added economy to consumers.

Technical data on the molding characteristics of Koppers Polystyrene and on its suitability as a container for your particular type of food will be furnished on request. As always, we want to work with you to obtain the best results from your use of Polystyrene . . . to solve your particular molding problems (with special attention to military end uses) . . . and to design new products to be made from Koppers Polystyrene when the supply situation again becomes more normal.

This FREEZ-TAINER is molded of Koppers Polystyrene, transparent for quick identification of contents. The cover of flexible polyethylene forms a leakproof seal, yet is easily removed. Molded for Crown Cork Specialty Corp., St. Louis, Mo.

Koppers Polystyrene has made Many Products Better and Many Better Products Possible.

KOPPERS

Koppers Plastics

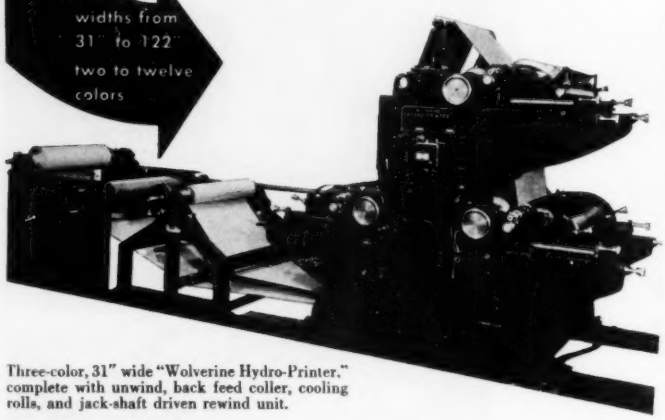
KOPPERS COMPANY, INC., Chemical Division, PITTSBURGH 19, PA.

SALES OFFICES: NEW YORK · BOSTON · PHILADELPHIA · CHICAGO · DETROIT · LOS ANGELES

A UNIVERSAL PRINTING UNIT
for EVERY PACKAGING NEED

"WOLVERINE HYDRO-PRINTER"
(automatic hydraulic aniline printing press)

widths from 31" to 122"
two to twelve colors



Three-color, 31" wide "Wolverine Hydro-Printer," complete with unwind, back feed coller, cooling rolls, and jack-shaft driven rewind unit.

Prints on —

foil • film • board • paper • plastic • cellophane

The outstanding printing results, simplified operation, matchless versatility and rigid, compact construction of the "Wolverine Hydro-Printer" are creating new standards for evaluating presses and their performance within the packaging industry.

It's quiet and vibrationless in operation, running with amazing smoothness, even at extremely high speeds. What's more, it's so designed that absolute color register is maintained while the unit is running.

- hydraulic, instant on and off impression control
- free wheeling, constant rotating ink rollers
- instantaneous running register control
- one single impression drive gear (no backlash)
- rigid, solid and compact 5-inch frame construction
- single push-button for complete control

If profits are your motive, you definitely need to know more about the high-speed, quality printing the "Wolverine Hydro-Printer" will produce. *Illustrated, detailed literature is available.*

"WOLVERINE CUB SHEETER" — the most accurate and highest speed sheeter on the market. Ask about it.

Wolverine
PAPER CONVERTING MACHINERY CORPORATION
3545 Seven Mile Road EAST • Detroit 34, Michigan

sublimated essence of all that America stands for—a decent thing honestly made, universally distributed, conscientiously improved with the years. . . ."

One thing that may be incapable of further improvement, however, is the 35-year-old Coca-Cola bottle. In reporting its effect on Raymond Loewy, who keeps a Coca-Cola bottle on his office shelf among a group of "perfectly formed" objects to which he looks for daily inspiration, John Kobler said in a recent issue of *Life* magazine:

"Loewy broods a good deal about the callipygian Coca-Cola bottle. . . . Though in full retreat from streamline principles, it remains the queen of the soft-drink containers. But then, Loewy points out, its shape is aggressively female—a quality that, in merchandise as in life, sometimes transcends functionalism."

CREDITS (*principal current suppliers to Coca-Cola bottlers*): **Bottles**—*Owens-Illinois Glass Co., Toledo, Ohio; Chattanooga Glass Co., Chattanooga, Tenn.; Liberty Glass Co., Sapulpa, Okla.; Laurens Glass Works, Laurens, S. C.; Maywood Glass Co., Los Angeles, Calif., and Knox Glass Associates, Inc., Knox, Pa.* **Crowns**—*Armstrong Cork Co., Lancaster, Pa.; Bond Crown & Cork Co., Wilmington, Del.; Consolidated Cork Corp., Brooklyn, N. Y.; Crown Cork & Seal Co., Baltimore, Md.; Hoosier Crown Corp., Crawfordsville, Ind.; W. H. Hutchinson & Son, Inc., Chicago, Ill.; Sheller Mfg. Corp. (Mitchell & Smith Div.), Portland, Ind.; Mundet Cork Corp., North Bergen, N. J.; Western Crown Cork & Seal Corp., San Francisco, Calif., and Crown Cork Specialty Corp., St. Louis, Mo.* **Carry-home cartons**—*Empire Box Corp., Garfield, N. J.; Acton Mfg. Co., Inc., Arkansas City, Kan.; Atlanta Paper Co., Atlanta, Ga.; J. L. Clark Co., Rockford, Ill.; Durable Plastics, Inc., Sherman, Tex.; Gardner Board & Carton Corp., Middletown, Ohio; Morris Paper Mills, Chicago.* **Delivery cases**—*Chattanooga Box & Lumber Co., Chattanooga, Tenn.; The Mengel Co., Louisville, Ky., and Weiner-Stevenson Co., Grand Rapids, Mich.* **Bottling machinery**—*Barry-Wehmiller Machinery Co., St. Louis; Michael Yundt Co., Waukesha, Wis.; Miller Hydro Co., Bainbridge, Ga.; Geo. J. Meyer Mfg. Co., Cudahy, Wis.; Radio Corp. of America, Camden, N. J.; Standard-Knapp (Div. of the Emhart Mfg. Co.), Portland, Conn.; The Heil Co., Milwaukee; Crown Cork & Seal Co. (Machinery Sales Div.), Baltimore, Md.; Liquid Carbonic Corp., Chicago; Specialty Engineering Co., Philadelphia, and Archie Ladewig Co., Waukesha, Wis.*

For over 50 years

discriminating manufacturers

have been building sales

of products which are packaged

in Rowell Containers.

Expert craftsmanship.

Magnificent color printing.

Prompt deliveries.

E. N. Rowell Co. Inc.
Manufacturers of Fine Paper Boxes
BATAVIA, N.Y.

any way you look at it!

yes—we feel sure that any way you look at it . . . quality of product, outstanding service, beautiful color, and practical eye appealling design are four great sales builders in this modern merchandising world. our facilities are at your disposal . . . to help you with any packaging need. stock designs and sizes, as well as a large variety of special sized containers are available. for further information write us.

olive can company

450 n. leavitt st. • chicago 12, illinois

Displays that sell

(This article continued from page 67)
customer asks for. If the unit is to get on the counter and stay there, it must also take up a minimum of space.

Eversharp has been working on this problem for years, continually improving space engineering and the ease of dispensing from such units.

Just recently the display department has come up with what the company considers the best answer so far—a new cabinet constructed of wood, glass and thin-gauge metal shelving which they call their "Lead-O-Matic." In this unit, measuring only 18 by 23 by 6 in., are stocked five gross of 68 different types of pencil-lead packages. The most that could be stocked in any previously designed cabinet was three gross, yet the new cabinet, due to its ingenious arrangement, takes up no more counter space than the old. A majority of sizes and grades are visible in their compartments behind a glass window, making it possible for the customer to point out what he wants and for the clerk to remove the selection from the rear. Additional stock is efficiently placed in four partitioned drawers opening from the rear of the base of the unit.

Notable increases in sales of leads have been recorded in stores using this unit.

The display of fountain pens presents an entirely different problem for Eversharp. Before he buys, each customer wants an opportunity to select the kind of a pen point that suits his handwriting. The dealer, of course, gives the customer that opportunity, but the task of selection has been made a great deal simpler by the compact counter unit Eversharp has designed to show at a glance eight different styles of nibs for its Hand-Wrought 14K gold pen points. The display is of easel construction formed of a curved piece of plywood with trade and product name printed on gold-lacquered aluminum foil laminated to a top panel. Behind a large opening in the plywood is mounted a burlap-covered pad on which are affixed eight different styles of pens, with their point designations printed below each. The opening is covered in front with a drawn transparent acetate blister, so that the pens are always visible but protected from dust and shoplifting. They may be removed by means of a hinged flap in

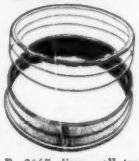
Sealing Unlimited
...for LIFE of
CONTAINER and PRODUCT
TO CLOSE
TO OPEN
U-PRESS-IT
HERE
PRESS SIDES DOWN AND IN
SEALS OF APPROVAL
FREE... eight-page booklet in color, telling about the Upressit Cap ... the can and bottle seal winning customer approval the country over.
This book describes the ease and safety of sealing cans and bottles with Upressit Caps ... explains how you can eliminate customer kickbacks from leakage ... evaporation ... staleness ... flatness.
Highly illustrated, the book has a comprehensive chart of cap sizes with photographs of caps, overseals, and closing and crimping equipment.
Write today for your copy of "Seals of Approval."
UPRESSIT PRODUCTS CORPORATION
420 Lexington Avenue, New York 17, N. Y.
Name
Title
Company
Street
City Zone State
U PRESS IT
UPRESSIT PRODUCTS CORPORATION
420 LEXINGTON AVENUE NEW YORK 17 N Y

HEADQUARTERS FOR MOLDED BOXES

Birthday Cake metal hinged, pearlized, candles shipped separately

Over 100 styles to choose from

Little boxes, big boxes. Transparent boxes, opaque boxes. Hinged boxes, unhinged boxes. Plain boxes, compartment boxes . . . just as long as they're molded of plastic, and you need a thousand or more, we'll fill your needs.



R.B. 2½" diam., all transparent; also clear cover, opaque base

No. 425 — 7½"x1½"x1", unhinged, clear cover, opaque base

No. J.B. — unhinged, clear cover, opaque base

No Mold Cost to Pay. Our affiliation with 20 leading molders puts us in a position to deliver the boxes you want at prices you'll like.

16/78 Chest—5⅜"x3¼"x1" with or without plastic sliding tray

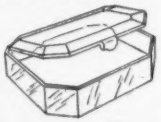
No. 105 — 4"x1¾"x1½", clear cover, opaque base

Write for Illustrated Catalog Sheets. Given a brief idea of what you want to package and quantity desired, we can send you photographs of appropriate boxes from our stock molds. Write today.

No. 6004—8"x6½"x¾"

IRA HARMON CO.

41 East 42nd Street, New York 17, N. Y.



No. 718 — 2¾"x1⅞"x½" hinged

Look at these *aniline-printed* folding cartons.

See their clean, sharp, crisp printing.

Remember they were printed from MOSSTYPES®

...the *pre-madeready, precision-molded* rubber printing plates.

All three cartons printed by INDUSTRIAL PACKAGING CO., INC., Brooklyn, N. Y.

WORLD'S BEST SOURCE for...
RUBBER PLATES and DESIGN ROLLERS

MOSSTYPE CORPORATION

From ART to PLATES... 33 FLATBUSH AVE., Brooklyn 17, N. Y.

a complete production service for converters everywhere

the rear. When a customer desires to select a pen, he merely has to look at the display to tell the dealer which of the points he wishes to try.

This compact unit has so facilitated the selling of pens that it has received almost universal dealer acceptance throughout the United States and is now being considered for use by the company's export division.

Razor blades pose a different problem; they often require a touch of novelty to keep them on the counter near the cash register—and pilfering is a serious problem. An interesting unit which Eversharp is currently market testing for 73-cent packages of Schick Injector blades is a compact mechanical dispenser that actually rings a bell to warn the shopkeeper each time a package of blades is removed. The sound of the bell also attracts attention in the store—a good reminder to other shoppers that they need blades. And once a package is taken out by a curious shopper, he is likely to buy just because he finds the package is in his hand. In test stores, the dispenser has met with such success that the company expects to go ahead with it on an expanded national basis in the near future.

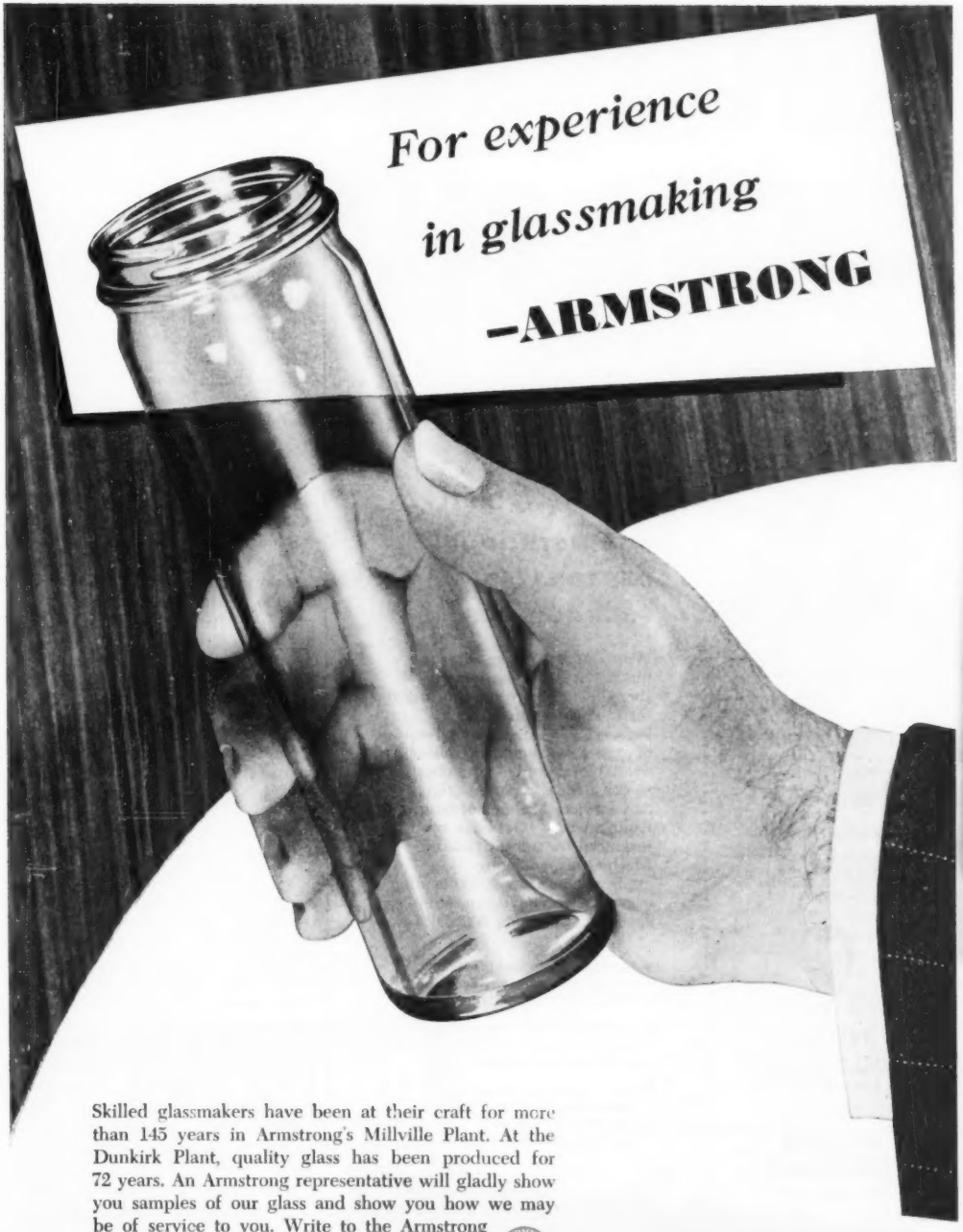
CREDITS: *Cabinet for pencil-lead packages, Wrigley Display Co., New York. Eversharp Schick Injector blade unit and 14K Hand-Wrought pen display, Merit Displays Co., New York.*

Wastepaper salvage

A new record was set for collection and consumption of wastepaper during the first six months of this year with the collection of 5 million tons, according to Colley S. Baker, director of the Eastern Conservation Committee of the Wastepaper Consuming Industries, New York.

Use of wastepaper will reach 10 million tons this year, at the present rate of consumption, compared with 7,904,000 tons last year. The previous peak year was 1947, when 8,009,000 tons were consumed. Although a drop in civilian requirements is expected, indications are that military needs may be great enough to maintain present production.

During the past six months about half of all newspapers published and one-quarter of the paperboard produced were salvaged.



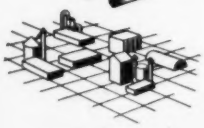
Skilled glassmakers have been at their craft for more than 145 years in Armstrong's Millville Plant. At the Dunkirk Plant, quality glass has been produced for 72 years. An Armstrong representative will gladly show you samples of our glass and show you how we may be of service to you. Write to the Armstrong Cork Company, Glass and Closure Division, 2308 Prince Street, Lancaster, Pennsylvania.

CULLIGAN® SILICA GEL

the ideal desiccant

FOR METHOD II DEHYDRATED PACKAGING...

When moisture is murder to metal parts and equipment, there's no need to dig and delve for the answers to proper packaging! Culligan's field-staff of expert packaging engineers are available to contractors coast-to-coast for competent counsel and service. Millions of bags of Culligan Silica Gel have been produced for a multitude of Method II packaging applications. Over 2,000 leading organizations have consistently specified this grade A desiccant.



experience!

Culligan . . . the world's largest distributor of desiccants at the close of World War II.

leadership!

Research and new developments are a continuing activity at our headquarters in Northbrook, Illinois

service!

Culligan's nation-wide field staff of expert packaging engineers is available for counsel.

- **Culligan Silica Gel meets current military specifications. Prices are competitive.**
- **Available in all standard bag sizes, in bulk, or custom packaged to fit your immediate needs.**
- **Two convenient shipping points: Northbrook, Illinois (suburb of Chicago); San Bernardino, California**

CULLIGAN DESICCANTS

Copr. 1961 C.Z. Co.

write for price list and specification sheet

CULLIGAN ZEOLITE COMPANY

Home Office: NORTHBROOK, ILLINOIS

PI proposals

(This article continued from page 114)

penetration, delamination, leakage and the like.

At the same time the product itself is to be inspected or assayed to determine if physical or chemical changes have occurred such as color change, precipitate formation, significant evaporation, etc.

Report

Report in tabular form the results of all test inspections. Care should be taken that the report includes complete data regarding the closure, the test-liner material and the container itself, and the dates involved. This record should become a part of the permanent records of the package development laboratory.

Notes

The proposed test is recommended by the Drug and Pharmaceutical Committee for use in determining the suitability of the closure-product combination and at the same time to provide a prolonged test of the shelf life of the product. It is assumed that during the latter part of the test the product may actually be marketed and in use.

The preliminary test A for 30 days will often be sufficient to eliminate the least compatible of the liner materials.

New syrup bottle

Maple syrup, traditionally packaged in metal or glass containers, is now being shipped by the Marlow Hill Farm, Marlow, N. H., in unbreakable, squeezable polyethylene bottles to New Hampshire troops in Korea.

For the overseas shipments, 8- and 16-oz. plastic bottles are being used. The owners of the farm are sending the syrup to the fighting men of their state as a dietary relief from front-line rations. The bottles met the requirements for a light-weight, unbreakable container that would pack easily. Their squeeze dispensing feature makes the bottles practical for soldiers in the field.

As a result of the experience, Marlow Hill Farm may extend the application of this packaging for maple syrup to domestic use for sale in gift shops, variety stores and other outlets.

CREDIT: *Bottles, Plax Corp., Hartford, Conn.*

LOOK, MISTER!

Your Product is Showing

Seeing is believing in merchandising today—and the package that lets buyers SEE your product is your best "silent" salesman.

That's why Lusteroid vials and tubes sell by the million. These distinctive plastic containers display as well as protect your product during the complete merchandising cycle.

Get the story on Lusteroid and SEE for yourself how much better you can do with Lusteroid's light weight, strength, color, printability, and savings. Sizes from ¼" to 1¼" in diameter and lengths up to 6". Cork, slip-on, and screw-cap closures.

Write for details and samples.

LUSTEROID
Vials and Tubes

LUSTEROID Container Company, Inc.

10 West Parker Avenue, Maplewood, New Jersey

MARKEM

marks them all

FROM ARTILLERY SHELLS TO MEDICAL AMPULES

MASTERS OF MARKING — Since 1911

Markem methods, machines, type and inks have been marking the products of industry for forty years. Markem machines can mark up to many thousands of pieces per hour. They make clear, durable imprints on flat, curved or irregular surfaces of paint, paper, wood, glass, metal, leather, plastic, rubber, fabric, composition and pressure sensitive tapes. No special skill is needed for their operation. Legend and color of imprint may be quickly and easily changed.

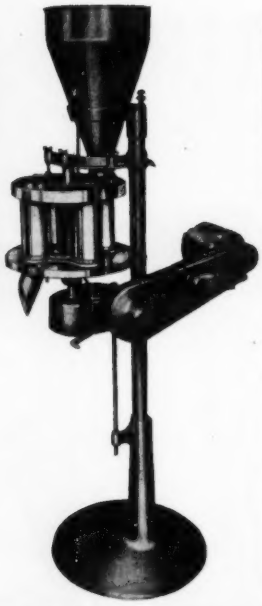
MAKE *YOUR* MARK WITH MARKEM

When your products need marking for Identification, Control or Market — ask Markem. Submit your problem, together with a sample of the item to be marked. Markem Machine Company, Keene 1, New Hampshire.

MARKEM
BETTER MARKING SINCE 1911

FILLMASTER VIBRATORY FILLER

for dry and semi-dry products



STUYVESANT ENGINEERING COMPANY
107 STUYVESANT AVENUE LYNDHURST, NEW JERSEY

Every month the readers of MODERN PACKAGING request thousands of informative booklets, catalogs and other publications which are listed in the Manufacturers' Literature page. This service to our readers makes it simple for you to send for the literature you want.

Others use it, why don't you?

The Manufacturers' Literature page is printed on heavy colored paper, so it's easy to locate in each issue. All you do is circle the items you want, fill in the free reply card and mail. And before long, you'll receive the literature you have asked for.

Take advantage of this free service without further delay. Turn to the Manufacturers' Literature page *now!*

A Service of **MODERN PACKAGING**
A Breskin Publication
575 Madison Avenue New York 17, N. Y.

Wooden containers

Indications are that the wooden box and crate industry will meet defense and essential domestic container needs within the limits of present production capacity, barring future demands beyond anticipated limits, according to information developed at the National Wooden Box Assn.'s 52nd annual meeting, which was held recently in Washington.

Best estimates indicate a sharp upturn and subsequent leveling off in ammunition-box demands during 1952. Although the level expected to be reached next year would be 75% over present levels, there seems to be no doubt but that the industry's capacity will be able to satisfy all of the requirements.

Several factors will contribute to the production increase possible under the industry's present plant capacity; the lumber-supply situation will ease due to working out of seasonal production problems and the decreased apple-box production in the Pacific Northwest will release footage for other food containers.

Probably the greatest problem facing manufacturers of nailed wooden boxes, according to the industry, is the sky-rocketing prices of stumpage. The wooden box and crate industry, large user of low-grade lumber, is at a disadvantage during periods of high lumber prices. It appeared in several instances that reported shortages of wooden containers were of a regional and short-time nature.

Industry estimated that less than 25% of current output of industrial wooden containers is subject to DO ratings and, therefore, that the industry's output is still largely designed to serve the civilian economy. Despite anticipated increases in demand for the industry's products by defense agencies, H. H. Pein, association president, pledged the industry's support in endeavoring to maintain a strong civilian economy.

STANDARD CLOSURE

The metal pry-off closure used to vacuum seal the molded polystyrene jar produced by Southern California Plastics Co. for Diamond Walnuts is of a standard type, similar to that commonly used on glass containers. The item on p. 89 of our June issue was in error in indicating that the cap was specially developed for the container.

"NEVERSTOP"

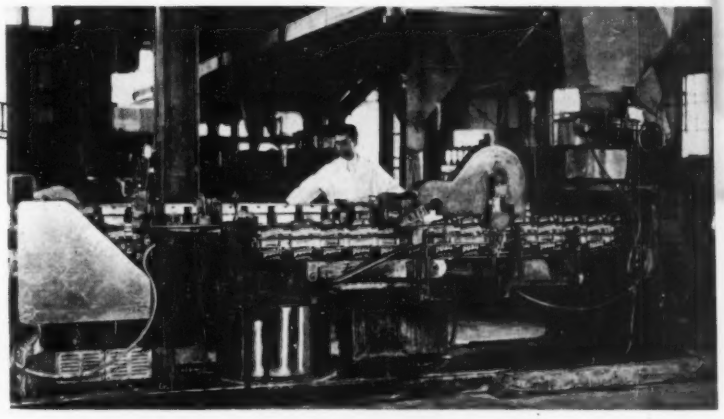
CARTON FILLING AND SEALING MACHINE
CONTINUOUS MOTION • HIGH PRODUCTION

UP TO **200** PER MINUTE

The Neverstop Machine *automatically* feeds the cartons from a supply, bottom seals them, fills through adjustable volumetric measuring cups, (*automatically ejects slack filled cartons,*) and top seals them. This method of filling is particularly suited for free flowing products like salt, soap granules, rice, cracker meal, etc., where the density of the product is uniform.

For powdered or non-free flowing products separate Filling Machines can be used, in which case the Neverstop Machine feeds the cartons, bottom seals them, delivers them to the filling unit and, after they are filled, top seals the cartons.

The carton "Neverstops" after being fed, and there are a number of cartons in the machine at one time in different stages of filling and sealing. This continuous motion assures high production of accurately filled, neat and well sealed cartons.



INSTALLATION OF MODEL "A" NEVERSTOP CARTON FILLING AND SEALING MACHINE FOR 24 OZ. SOAP GRANULES

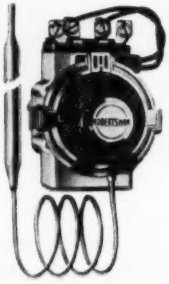
STOKES & SMITH Co

PAPER BOX MACHINERY — PACKAGING MACHINERY

Frankford, Philadelphia, U.S.A.

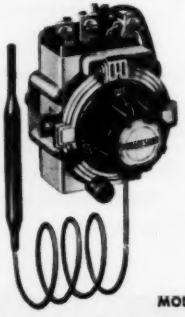
Subsidiary of Food Machinery and Chemical Corporation
Exclusive West Coast Distributor: Anderson-Barngrover Division of FMC
San Jose 5, California

Robertshaw® THERMOSTATIC CONTROLS SERVE THE PACKAGING INDUSTRY IN MANY WAYS



A sturdy, dependable, automatic, rugged, responsive direct-acting, electric thermostatic control for jaw sealers, band or belt sealers, tester equipment, bake ovens, glue pots, etc. (Available also in Reverse-Acting Models.)

MODEL D-1



CYCLES AS A THERMOSTAT

AUTOMATICALLY CUTS OUT AT SET LIMIT

STAYS OUT UNTIL MANUALLY RESET

A double pole, single throw temperature controller with an auxiliary single pole, single throw switch that automatically cuts off all current and locks switch in an open position whenever the temperature exceeds temperature range by approximately 7° F. in liquid or 12° F. in air. Available in AC only.

MODEL H-1

HI-HEAT TO LOW HEAT

FOR BLOWER AND HEATER

FOR AGITATOR AND HEATER

A two-circuit thermostat. When two heating elements are used, high heat element automatically cuts in when thermostat calls for heat. When set temperature is reached, main contacts are automatically broken and low, or holding temperature is cut in to function until drop in temperature again calls for heat.

MODEL F-1

Write for descriptive literature.

In Home and Industry, *EVERYTHING'S UNDER CONTROL*

Robertshaw

THERMOSTAT DIVISION

ROBERTSHAW-FULTON CONTROLS COMPANY

YOUNGWOOD, PENNSYLVANIA

Display report

Findings in a report entitled "Practices in the Handling of Window Displays," issued by the Display Steering Committee of the Assn. of National Advertisers and based on returns from 116 questionnaires, indicate the following:

1. Over four-fifths of the companies notify their dealers of the availability of non-mechanical window displays prior to shipping them, while all give prior notice before sending dealers mechanical window displays.

2. Two-fifths of the companies use professional installation companies for distributing their full window displays, while half the companies use professionals for installing non-mechanical full window displays. The liquor industry is the major user of professional installers.

3. Of all the industries canvassed, the textile group is the only one in which the dealers, and no others, install all their displays. In all others, more than one method of installation is employed.

4. Companies in the drug and cosmetics, alcoholic beverage and food industries do not in any case have their dealers pay for displays. In other industries the dealers have to pay in some way for certain displays.

5. From one-half to two-thirds of the companies do not use traveling or itinerant displays.

Copies of the complete report are available at $3 each from the Assn. of National Advertisers, 285 Madison Ave., New York 17.

European mission

Greater standardization of European production of packaging materials and improved methods of manufacture of paper and paperboard in Europe are expected to result from a six-week study of the American packaging industry completed today by a special mission sponsored by the Economic Cooperation Administration under its technical assistance program.

The mission, composed of 17 European industrialists in the packaging field, visited approximately 25 American paper-products plants in 14 states during a tour arranged by the Office of International Trade, U. S. Dept. of Commerce. The group included representatives from Austria, Belgium, Den-

JOHNSTON

Offers Prompt Delivery of

ALUMINUM FOIL
COMPOSITION FOIL
LEAD FOIL

on Defense Orders

Through the years, Johnston has acquired the know-how to produce the proper type of foil for a given purpose.
Write today for full details regarding proper type of foil for your purpose in connection with your defense contract.

JOHNSTON FOIL MANUFACTURING CO.

Makers of Quality Foil for over 60 Years

6016-6298 S. Broadway **St. Louis 11, Mo.**

Sales Offices:
608 SOUTH DEARBORN, CHICAGO, ILL. 34 EXCHANGE PLACE, JERSEY CITY, N. J. 633 SOUTH LA BREA AVE., LOS ANGELES, CALIF.

Durethene Chicago

NEW

"SNAP IT SHUT"

BAG AND LINER

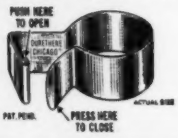
CLOSURES

FOR SMALL BAGS

SMALL No.100-1
Small Bag Closure

FOR LARGE CARTON AND DRUM LINERS

LARGE No.100-2
Large Bag and Liner Closure



- MADE OF STAINLESS STEEL
- INEXPENSIVE
- EASY TO USE
- UNAFFECTED BY TEMPERATURES
- CAN BE USED OVER AND OVER AGAIN
- NO TOOLS REQUIRED TO PUT ON OR TAKE OFF
- WILL NOT RUST
- AVAILABLE FOR FAST SHIPMENT FROM STOCK
- SAMPLES ON REQUEST

A DURETHENE PRODUCT
PRODUCERS OF FLAT AND TUBULAR POLYETHYLENE FILM FOR THE BAG CONVERTER

DURETHENE Corporation

1859 SO. 55th AVENUE
CHICAGO 50, ILLINOIS

mark, France, Germany, Greece and Ireland.

In an interim report submitted by Samuel C. Stovall of the OIT trade development division, the mission is said to have been "greatly impressed by the free interchange of ideas and methods that exists among competitors in the packaging industry in this country . . . It was also found that American plants place great stress upon the conservation of material and the prevention of waste." The mission representatives emphasized the need for better coordination among their own countries' packaging organizations.

Informed that losses as a result of shipping amount to nearly $100 million a year, the mission noted that great improvements are yet to be made in the safeguarding of movements of goods. The European specialists said they were confident that improvements would be made in their own plants.

Mechanized bottling

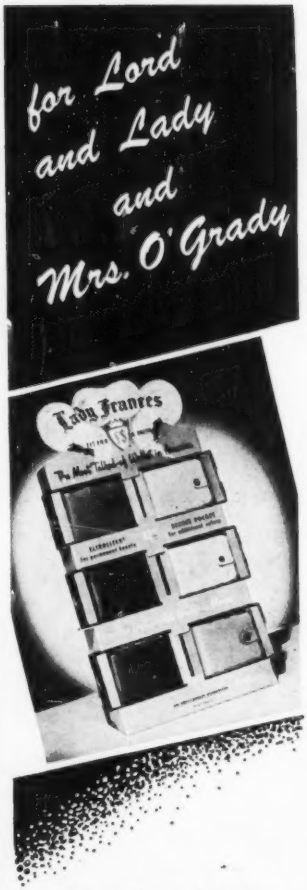
(*This article continued from page 70*)

lip. Heat transfer also occurs between these two parts, resulting in a permanent, unbreakable, leakproof seal.

The filled, tested and sealed bottles now pass through the final inspection operations where the closure is applied and the bottle tested for proper seal and appearance, after which the bottles are packed and transported to another section of the Pharmaceutical Manufacturing Division for labeling and cartoning.

Initial work on the new package began in March, 1950. Despite the magnitude of planning which was involved in developing each package component as well as the heat-sealing machine and the changes in the packaging line, the new package went into production in one year. Mr. Zahn points out that this is the result of the company's decision, made early in the planning, to centralize the responsibility for materials and new equipment with one company and its affiliates so that follow-through on all the small details would be simplified.

CREDITS: *Polyethylene bottles, closures and nozzle plugs, Plax Corp., Hartford, Conn. Polyethylene capillary tubing, Jessel Plastics, Inc., Hartford, Conn. (through Plax Corp.). Tube-inserting and heat-sealing machines, Emhart Mfg. Co., Hartford, Conn. Labels, Avery Adhesive Label Corp., Monrovia, Calif. Cartons, Wilkata Folding Box Co., Kearny, N. J.*



B & P designs and produces handsome, sturdy, economical counter and window displays.

Their freshness and sparkle - in design and copy - are a constant invitation to buy, whatever your merchandise may be.

We like customers who are "from Missouri". Let's have your problem and we'll show you.

BROOKS & PORTER, INC.
304 HUDSON STREET
NEW YORK 13, N. Y.
AL•GONQUIN 5•4848

DESIGNERS AND MANUFACTURERS OF FOLDING BOXES AND DISPLAYS FOR OVER HALF A CENTURY

NOW! Wax by the carTON

Another Exclusive Cities Service Advance

New 1-ton carTON full of Economies

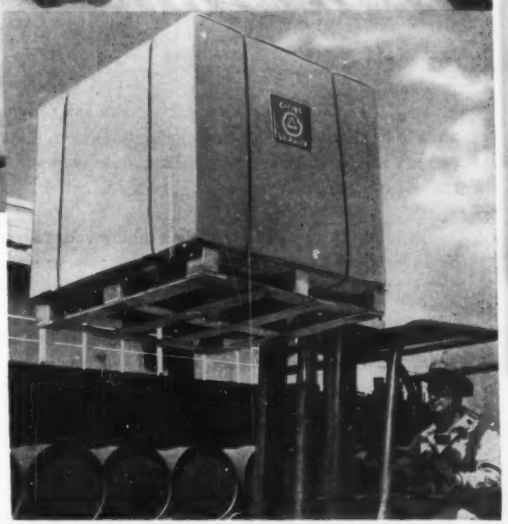
Economy: Hours Saved, Unloading and Handling

Economy: All-Clean Wax Every Time

Economy: New Freedom from Slab Damage

Economy: Inventory Simplified at every step

Economy: 1-ton carTONS at loose slab Price!



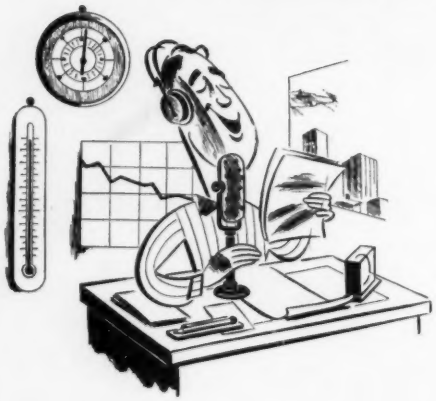
Fully refined wax in 1-ton carTONS is now marking up another new high for Cities Service progressiveness. Only Cities Service packs wax this new way . . . this best way to give you extra economies. And you still get that most basic of all economies — the through-and-through quality of Cities Service fully refined wax. Tell Cities Service what you want in wax . . . and what technical assistance you'd like. You'll get all you ask for. Write CITIES SERVICE OIL COMPANY, Room 95, Sixty Wall Tower, New York 5, N. Y.

CITIES SERVICE

QUALITY PETROLEUM PRODUCTS

Weather Forecast:

PLASTIC PACKAGING FOLLOWED BY INCREASING SALES



While it's true that plastic packages do not provide a universal answer to all packaging problems, reports from all corners of the country tell how pleased retailers and customers are when a product and a plastic package are right for each other.

. . . but there's more to it than telling your purchasing agent: *Buy us some plastic packages.* You owe it to your product to "bone up" on the changing plastics scene.

Each month MODERN PLASTICS brings you the latest items of interest to everyone who uses plastics products in any form. Long a prime source for authoritative comment on *current* plastics developments, MODERN PLASTICS also give you *long term dividends* in the form of enlightening articles, surveys and reports on important phases of the industry.

The cost? Only $5 per year (12 issues), anywhere in the world. Don't miss another issue. Just write. We'll enter your subscription and bill you later.

MODERN PLASTICS

A Breskin Publication

575 Madison Avenue New York 22, N. Y.

Pre-pack tomato rift

A number of vegetable dealers have come to the fore to proclaim the advantages of pre-packaged tomatoes vs. bulk tomato sales as a result of a controversy arising from a syndicated column by Frederick C. Othman in the Scripps-Howard newspapers.

The controversy started when Mr. Othman quoted Austin E. Anson, executive manager of the Texas Citrus & Vegetable Growers & Shippers, as saying that the handy cellophane package, designed to popularize the tomato, has "boomeranged"; that the average purchase today has shrunk from 1¾ lbs. when sold in bulk to 14 oz. packaged in cellophane-covered trays; that sales have dropped as much as 50% throughout the nation.

Refuting these statements, the Fort Pitt Tomato Co. of Pittsburgh comes up with the following statistics: "Consumption of fresh tomatoes has steadily increased since the rise and progressive advancement of scientific market handling. It has risen, in fact, from 17 lbs. to 23 lbs. per capita in the past 25 years."

Fort Pitt disclaimed Mr. Anson's charges of profiteering. Stating that chains and big independent supermarkets are the largest buyers of cellophane-wrapped tomatoes in trays because they fit into the self-service system, Fort Pitt declared that these large-volume outlets endeavor to keep their mark-ups as low as possible.

"Mr. Anson may feel that the tomato tube is ruining the tomato business, but pre-packagers can't put any finer tomatoes into the tubes than the ones growers and shippers provide them. The better the tomatoes, the better the distribution job pre-packagers can do for these factors," the firm declared. Mr. Anson, it was pointed out, forgot to mention in his cost determination that tomatoes are shipped green and have to be ripened in the market—in ripening rooms which are costly.

Also taking issue at the "inaccuracy" of the cost figures presented in Mr. Anson's statement was Samuel S. Leef of Leef-Schniebolk Co., New York. He stated that his firm sells tomatoes at 19 cents a pound, not 30 cents as claimed by Mr. Anson. Tomatoes are not "squeezed" into a cellophane tube, he pointed out; his firm has a tube to fit almost every tomato, with extra large ones being packed in tomato wraps.

Health Insurance

THESE milk bottle closures, made from heavy gauge Kaiser Aluminum Foil, are replacing old-style caps throughout the country. It's an idea *every* milk company should adopt . . . for these reasons:

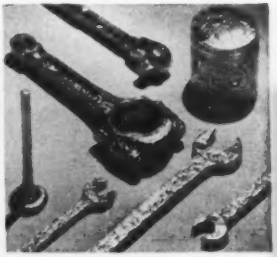
PROTECTS HEALTH—Whether laminated or all-aluminum foil, the closure covers the pouring lip—at the dairy, on the route, in the home—protects it against germ-carrying dirt or soiled hands. That's why these closures have earned the approval of the American Medical Association and the United States Public Health Service.

PROTECTS FLAVOR—The rich, wholesome flavor of fresh milk is sealed, air tight, in the bottle. Moisture has no effect on foil, thus it won't rust or get soggy.

EASY TO OPEN—easy to close. All types can be readily lifted off, the bottle easily recapped. Tipping won't spill milk.

Which of these advantages can be applied to *your* customers' problems? Call us now and we'll be glad to work with you. Sales offices in principal cities. Kaiser Aluminum & Chemical Sales, Inc., Oakland, California.

LONGER SHELF LIFE—Candy wrapped in Kaiser Aluminum Foil can stay on counter for days, still remain factory-fresh, wholesome.



PREVENTS DETERIORATION—Ductility of Kaiser Aluminum Foil makes it easy to shape around tools, machinery . . . protects against moisture, corrosion.

PROTECTION PLUS sales appeal—Oleomargarine, packaged in Kaiser Aluminum Foil, is preserved without refrigeration. Increased display boosts sales appeal.

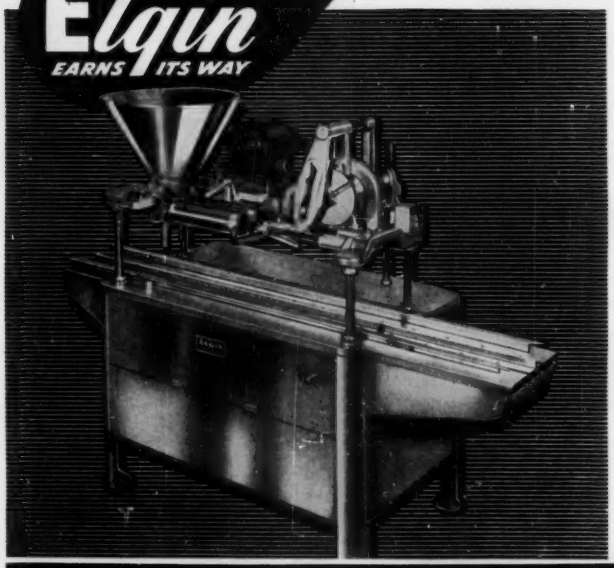
CUTS COSTS—Pouches of Kaiser Aluminum Foil are made by Dental Perfection Co., Inc., to protect impression material used for fitting dentures. Rolls of aluminum foil permit fast, low-cost machine fabrication.

Kaiser Aluminum

Setting the pace . . . through quality and service

TWIN 2 VALVE FILLER

Elgin EARNS ITS WAY



Now! Available with Exclusive

FINE FILL ADJUSTMENT

NEW! A low cost attachment which permits accurate adjustment of the fill while machine is in operation. This newly developed fine fill adjustment is optional equipment for the Elgin Twin and Quad Fillers. A conversion unit with complete instructions for installation at the plant is also available for Elgin Single Valve, Twin and Quad Fillers now serving packers. Write for details.

THRIFT—Economy-wise production men choose Elgin Machines for their lower initial cost, minimum maintenance and operating expense.

VERSATILITY—Widely utilized by large and small plants because of their quick, simple changeover to accommodate a broad range of products and container sizes.

DEPENDABILITY—Long years of trouble-free, continuous production distinguish the Elgin equipment now serving leading packers in the food, paint, cosmetic, oil and various other industries.

IDEAL FOR* GLASS *OR TIN

Extensively used to fill mustard, peanut butter, relish, jams, jellies, mayonnaise, soups, creams, ointments, waxes, animal foods, horseradish, roofing cement and similar products.

WRITE TODAY! ADDRESS DEPT. MC

ELGIN MANUFACTURING COMPANY • 200 BROOK STREET • ELGIN, ILLINOIS

"Where can I purchase a.....?"

"We need a tube which will....."

"...and how can we make it stick?"

"What will keep my product moist when.....?"

"Our problem is to reduce caking of....."

"Who can redesign my package?"

Each month, the Readers' Service Department of MODERN PACKAGING answers scores of questions for our readers. Questions range from simple requests for information about the manufacture of a can, machine or box to requests which demand detailed, technical answers.

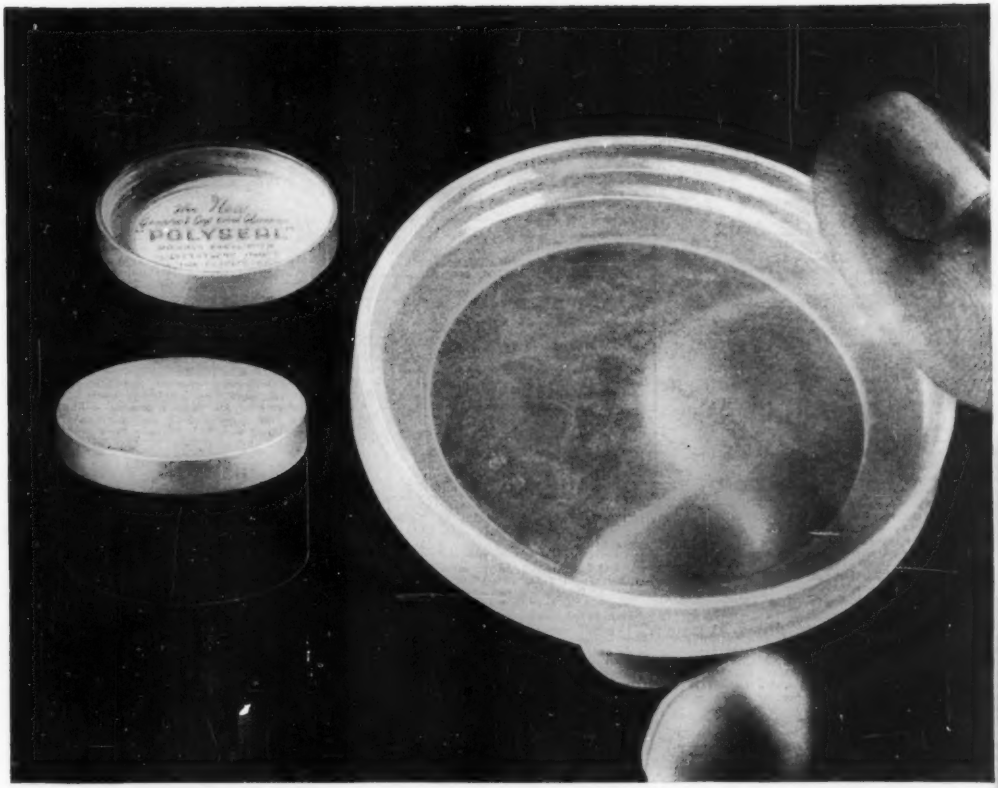
With their extensive files, reference library and wide knowledge of packaging materials, machinery and procedures, the members of the Readers' Service Department can usually supply the information you request. In addition, the technical and editorial staffs of MODERN PACKAGING are at their disposal for attending to questions which are particular "sticklers."

If you have any questions, feel free to forward them. There is no charge or obligation for this service. Address—Readers' Service Department, MODERN PACKAGING. A complete reply to your inquiry will be sent promptly.

MODERN PACKAGING

A Breskin Publication

575 Madison Avenue New York 22, N. Y.



Airtight cap liners of DU PONT ALATHON keep products fresher . . . longer

It's another packaging improvement made possible by the outstanding properties of "Alathon"

Here's improved protection for cosmetics, drugs, foods and other products packaged in jars and bottles. It's the "POLYSEAL"† cap liner, molded of Du Pont "Alathon"* polythene resin in one piece, complete with threaded sides. The liner is then firmly clamped into a metal outer shell for added support.

The liner prevents the loss of moisture and aroma. Keeps contents fresher —longer, increases shelf-storage life. The molder states: "Laboratory tests indicate the airtight seal assures indefinite protection of packaged goods in their original state."

Resilient "Alathon" compensates for variations in threads on jars and bottles and the cap is easy to remove. In thin sections, "Alathon" is transparent, permitting the use of printed matter on inside of cap. Also, the liner eliminates possible contamination of the product through contact with the printing inks. "Alathon" is odorless, tasteless, nontoxic. And it contains no plasticizer, is chemically inert to packaged goods, at normal temperatures, and is virtually unbreakable.

You'll find "Alathon" in most types of closures—screw-on, snap-on, plug-type, etc. It's low in cost, and its light weight and toughness in thin sections mean more closures per pound. In addition, "Alathon" is widely used for thin paper coatings in packaging foods, acids, alkalis, oils and corrosive chemicals. And, blended with wax, "Alathon" improves protection and appearance in food wraps.

Demand for "Alathon" currently exceeds supply. However, we suggest you investigate its properties and prepare for future applications. We'll gladly discuss the availability of quantities for development work. For further information, write:

E. I. du Pont de Nemours & Co., (Inc.)
Polychemicals Dept., District Offices:
350 Fifth Avenue, New York 1, New York
7 S. Dearborn Street, Chicago 3, Illinois
845 E. 60th Street, Los Angeles, California

†*Cap and liner developed by Formold Plastics, Inc., and General Cap and Closure Div., Jaques Mfg. Co., both of Chicago, Ill. Liners molded by Formold Plastics, Inc.* *REG. U. S. PAT. OFF.

DU PONT
REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY
Polychemicals
DEPARTMENT
PLASTICS • CHEMICALS

CLASSIFIED ADVERTISEMENTS

Modern Packaging reserves the right to accept, reject or censor classified copy.

EMPLOYMENT • BUSINESS OPPORTUNITIES • EQUIPMENT (used or resale only)

MACHINERY FOR SALE

FOR SALE: Very valuable asphalt laminating and coating machine 74" wide all electrical equipment. Immediately available. Rare opportunity. For inspection address or phone: Theo. Adams, 111 W. Washington, Randolph 6-4918. J-29

FOR SALE: New Jersey Automatic Gluer or Gummer, Model 1529, with pneumatic 20 foot belt. Never used for production, but demonstration only. Extra belt length permits laminating, mounting and odd shape fabrication directly on belt. Handling minimum 8" x 3" up to 26" x 36". The Smead Manufacturing Company (M) Hastings, Minnesota.

FOR SALE: Four New Jersey Pony Labelrite Labeling Machines for sale. Complete with motor controls. Reply Box 222, Modern Packaging.

FOR SALE: Sheeter—49" Finlay—single rotary sheet cutter. Range 19¾ to 72" with Hamblet Layboy 6 roll double deck stands 5 H.P. Motor—Reeves Drive $2500.00
G. B. Goldman Paper Company
316 North Third Street
Philadelphia 6, Pa.

FOR SALE: Monorail Conveyor, 280' continuous chain, with mounts and several 90° corners, plus 45° ups and downs. Variable speed drive. Hangers at 2' centers. Includes foot-cube tinned steel baskets for foods. Also 6' stainless steel prewashing tank and 18' thermo controlled gas fired stainless steel cooking trough. Ideal for rinsing and blanching ahead of quick freeze as is. Or adapt to paint, degreasing, or assembly line. Cost $6,000.00, used little sell $3,500.00. Reply Box 214, Modern Packaging.

FOR SALE: Complete Rotogravure Printing Plant. Half Interest or entire stock for sale. 3 Presses. 1, 2, 3, 4 and 5 color. 3 Champlains. Complete cylinder making department. Located in New York Area. Reply Box 217, Modern Packaging.

FOR SALE: International Stapling Machine, Model CZE, purchased new March 1950 and in excellent condition. Reason for selling—have changed type of packaging. Will handle all sizes of containers and stitch top and bottom at same time. Offered at sacrifice price. Reply Box 218, Modern Packaging.

FOR SALE: Pack-Rite continuous band sealing machine for Polyethylene. Excellent condition, used experimentally only. Price $375.00. Forbes Products Corporation, 625 South Goodman Street, Rochester, N. Y.

FOR SALE: Two Heinrich-Cottrell Aniline Printing Presses, four colors, roll-to-roll, suitable for cellophane, paper, foil, acetate, etc. One 42" wide and one 26" wide. Both available with a good assortment of printing cylinders. They are in excellent condition and may be inspected in operation in New York City. Reply Box 219, care of Modern Packaging.

FOR SALE: World semi-automatic labeler, Model S, purchased new from Economic Machinery in May 1950 and used only 30 days. Equipped with portable truck arrangement. Also 35½" belt conveyor, 30 feet 6" long, 5 h.p. motor and controls. Can ship immediately. Radiator Specialty Company, 1700 Dowd Road, Charlotte, N. C., Telephone 3-3131.

FOR IMMEDIATE DELIVERY AT GREAT SAVINGS: International S. S. Straightline 160/min. Vacuum Filler. Resina S and LC Auto. Cappers. New Way MH Wraparound Labeler. Pony ML and MX Labelrites. Stokes & Smith G1, G2 and HG88 Auger Powder Fillers. Amsco and Doughboy #46 Bag Sealers. Triangle Elec-Tri-Pak G2C, A6CA Fillers. Filler 1, 2, 4 and 8 Head S. S. Fillers. F. J. Stokes 90D Auto. Tube Filler and Closer. Knapp 429 and Ceco Carton Closers. Pneumatic Scale Auto. Cartoning Line. Redington and R. A. Jones Automatic Cartoning Units. Hayssen 3-7 Package Ca 2 and DF, Scandia Auto. Cellophane Wrappers. This Is Only a Partial List Tell Us Your Requirements.

UNION STANDARD EQUIPMENT COMPANY
318-322 Lafayette Street
New York 12, N. Y.

FOR SALE: Transwrap Model "A" Machine for sale. Fully equipped. Reply Box 224, Modern Packaging.

FOR SALE: Hayssen fully automatic package machine Model 5-11 with Oliver imprinter and labeler. Al-Bright-Nell conveyor table 12" wide 10' long rubber belt ⅓ horse AC 115 volt motor variable speed. Cube steak machine ¼ horse AC 115 volt motor. Meat grinder 51B 5 horse power motor approximately 1000 lb. capacity. Toledo scales all excellent condition, practically new computagrams, white enamel, double trays, capacity 30 lbs. face 0 to 2 lbs. ½ lb. graduations. New white paper trays, 500,000 laminated grease-proof both sides, original Gair packings hold ½ lb. more 5 x 2¾ x ¾. Excelsoir Quick Frosted Meat Products, Inc., 128 Sheriff Street, New York 2, N. Y.

HELP WANTED

MANUFACTURER WANTED: 1. Specialty Paper bags and sacks; 2. Film converted products, printed or plain, including cellophane. We seek association with reliable manufacturers of diversified lines as representative or will warehouse and distribute for principal or own account. Twenty years experience can mean large volume from jobbers and direct users; West Coast states with L. A. headquarters. Reply Box 221 Modern Packaging.

PACKAGING SPECIALIST: Well-established progressive multiproduct company wants chemist or engineer familiar with paper, paper board, and other packaging materials to assist in research packaging laboratory located on Eastern seaboard. Employee will apply background to improvement of present packaging and development of new types of packaging. Details of education, experience, salary desired, and recent photograph should be included in reply. Reply Box 220 Modern Packaging.

NATIONALLY known manufacturer of filing, labeling and packaging equipment requires well established representatives in Canada, Middle Atlantic States and other parts of the U. S. Representatives must have packaging experience and carry allied lines to ours. Write today for full particulars. Reply Box 205, Modern Packaging.

WANTED: If you are experienced in developing sales and uses for specialty bags, including a completely heat sealed self-opening bag, we have an opening in New York City Metropolitan area. Replies Confidential. Write full particulars to Box 226 Modern Packaging.

WANTED: Salesman—Experience in converting field, packaging and decorated papers. Plant near New York City. Reply Box 228 Modern Packaging.

MACHINE REPAIRMAN: Must be familiar with paper converting processes. Excellent opportunity for right man. Our employees know of this advertisement. All replies treated confidentially. Give full qualifications and personal information. Reply Box 215, Modern Packaging.

SITUATIONS WANTED

RESEARCH CHEMIST: Ph.D. from M.I.T. with eighteen years experience in organic chemistry, foods and confections, wood treatments, wood pulping, wood laminates, and the preparation, application, and pilot plant manufacture of vinyl resins desires a position in the packaging field in which this experience and the ability to supervise and conduct research can be used to full advantage. Publications. Some business training. Now employed near New York but can relocate. Reply Box 216, Modern Packaging.

PRODUCTION, TRAINING and PERSONNEL: College graduate, age 41, with 12 years successful background in this field. Wide experience all types liquid, ointment, powder filling, labelling, packaging. Design machinery for increased production. Interview and train personnel. Present associates know of desire for change. Will locate Metropolitan New York or Long Island. Reply Box 223, Modern Packaging.

PACIFIC COAST EXPANSION: International leading Packaging Engineer, 25 years experience in paper, cardboard, tin, plastic and glass packaging, authority on packaging design, mentioned in "Who's Who in Art." Outstanding salesman with exceptional connection to Western food and appliance industries offers representation service. Modern offices San Francisco. Capable to organize and control efficient sales forces. Reply Box 225, Modern Packaging.

MISCELLANEOUS

WANTED: Plastic scrap and rejects in any form. Cellulose Acetate, Butyrate, Polystyrene, Vinyl Polyethylene, etc. We pay top prices for clear, colored and printed scrap in any quantity. Reply Box 174, Modern Packaging.

WANTED: 1-Model A and 1-Model B Transwrap Machines; 1-S & S G-1 Powder Filler; Ceco A3901-12 Scaler; Jones Cartoner to handle 4 x 4 x 10. Reply Box 173, Modern Packaging.

PLIOFILM FOR SALE: Approximately 2,000 #'s 13½—120 N-1 Pliofilm; 3,000 #'s 14¾ 120 N-1 Pliofilm. In original containers and in perfect condition. Priced below cost. Material subject to prior sale. Write, wire, call PEBCO, 1901 Park Avenue, New York City. TR. 6-0402

CELLOPHANE FOR SALE—Narrow rolls and small sheets. Large Quantities—Reasonably Priced. Send replies to Box 227, Modern Packaging.

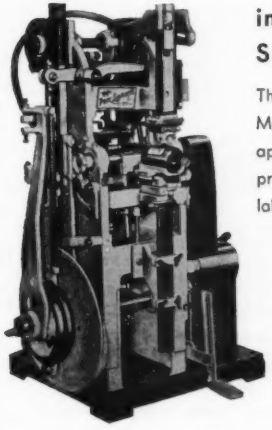
All classified advertisements payable in advance of publication

Up to 60 words.....$7.50	Up to 120 words $15.00	Up to 180 words.....$22.50
Up to 60 words (boxed).....$15.00	Up to 120 words (boxed)....$30.00	Up to 180 words (boxed).....$45.00

For further information address Classified Advertising department, Modern Packaging, 575 Madison Ave., N. Y. 22, N. Y.

"PONIES" labeled on a PONY LABELRITE*

Truly Distinctive....



in FLAVOR, BOUQUET SHAPE and APPEARANCE

These delightful "Pony" bottles, from the Almaden-Madrone Vineyards imply — by their immaculate appearance, the pride of the Vineyards in their product . . . a feature you can bank on when labeling on the vacuum pick-up LABELRITE.

- ★ PERFECT REGISTER
- ★ NO WIPING OF BOTTLES
- ★ NO BLISTERS OR LOOSE EDGES
- ★ HANDLES PONIES TO GALLON JUGS

512 *Reg. U. S. Pat. Off.

NEW JERSEY MACHINE *Corporation*

AUTOMATIC LABELING · PACKAGING — PAPER BOX MACHINERY · MAKERS OF THE PONY LABELRITE

FACTORY SALES AND SERVICE BRANCHES
325 W. HURON ST., CHICAGO 10, ILL.
1701 CAREW TOWER, CINCINNATI 2, OHIO
2500 W. 6TH ST., LOS ANGELES 5, CAL.

MAIN OFFICE & FACTORY 1510 WILLOW AVENUE, HOBOKEN, N. J.

INDEX OF ADVERTISERS

AUGUST, 1951

Acme Backing Corporation 124, 125
American Bag and Paper Corp. 161
American Can Co. 51
American Viscose Corporation (Sylvania Division) 187
Amsco Packaging Machinery, Inc. 135
Anderson Bros. Mfg. Co. 118
Andrews, P. L., Corp. 44
Armstrong Cork Company 35, 171
Arrow Manufacturing Company, Inc. 45

Battle Creek Bread Wrapping Machine Company 115
Beck Machine Corporation, Charles 119
Bemis Bro. Bag Co. 24
Bensing Bros. and Deeney 57
Black-Clawson Co., The, Dilts Machine Works Division 149
Bradley Industries 160
British Cellophane Limited 141
Brooks & Porter, Inc. 178
Brown Bag Filling Machine Co., Inc. 126
Burt, F. N., Company, Inc. 105

Cameo Die and Label Company 144
Celanese Corporation of America, Plastics Division 31
Celluplastic Corporation 23
Chambers-Storek Company, Inc. 140
Chaspee Manufacturing Company, The 135
Cities Service Oil Company 179
Claremont Waste Mfg. Co. 143
Classified Ads. 184
Cleveland Container Co., The 37
Container Corporation of America 59
Continental Can Company 52, 53
Corn Belt Adhesives 154
Crown Cork & Seal Co. 22
Culligan Zeolite Company 172
Cylinders, Inc. 129

Diamond Straw & Machine Co. 134
Dilts Machine Works Division, The Black-Clawson Co. 149
Dobeckmun Company, The 5
Dodge Cork Company, Inc. 8
Dow Chemical Company, The 121
du Pont de Nemours, E. I., & Co., (Inc.) (Cellophane) 43
du Pont de Nemours, E. I., & Co., (Inc.) (Cel-O-Seal) 117
du Pont de Nemours, E. I., & Co., (Polychemicals Dept.) 183
Durethene Corporation 178

Eastman Kodak Company, Cellulose Products Division 123
Economic Machinery Co. (Div. of Geo. J. Meyer Mfg. Co.) 30
Elgin Manufacturing Company 182
Exact Weight Scale Company, The 136

Ferguson, J. L. Co. 158
Fisher's Foils Limited 137
Flexible Package Co. 134
Forbes Lithograph Co. 34

Gair, Robert, Company, Inc. 1
Gaylord Container Corporation 127
Gilbert Plastics, Inc. 145
Globe Products—Heat Seal Corp. 155
Goodrich, B. F. Chemical Company (Geon Div.) 7
Goodyear Tire & Rubber Company, The Pliofilm Dept. 98, 99
Gummed Products Company, The 39, 40

Harmon, Ira, Co. 170
Hayssen Mfg. Company 140
Hazel-Atlas Glass Co. 55
Heat Seal-It Machines, Div. of Globe Products-Heat Seal Corp. 155
Heckin Can Co., The 38
Heinrich, H. H., Inc. 160
Hinde & Dauch 131
Howard Plastics 150
Hudson-Sharp Machine Co. 145

International Paper Company 23
Island Equipment Corp. 146

Johnston Foil Manufacturing Co. 177
Jones, R. A., & Company, Inc. 3

Kaiser Aluminum & Chemical Sales, Inc. 181
Kalamazoo Vegetable Parchment Company 36
Keiding Paper Products Company 129
Kilb, Francis C., Co. 118
Kimberly-Clark Corporation 146, 147
Kimble Glass 157
King, Charles E., & Co. 143
Koppers Company, Inc. 165

Lusteroid Container Company, Inc. 173

Manhasset Machine Co. 149
Mantrose Corporation, The 126
Manufacturers' Literature 151-152
Marathon Corporation Inside Back Cover
Markem Machine Company 173
Mehl Mfg. Co. 128
Mills, Elmer E., Corporation 17
Milprint Inc. 29
Monsanto Chemical Company 188
Moore, Kenneth J., & Co. 136
Moore & Munger 42
Mosstype Corporation 170

Nashua Gummed and Coated Paper Company 60
National Starch Products Inc. Inside Front Cover
New Jersey Machine Corporation 185
Nylco Products Inc. 163

Old Dominion Box Company, Inc. 139
Olive Can Company 163
Owens-Illinois Glass Company 133
Oxford Paper Company 58

Package Machinery Company 106
Paper Machinery & Research Inc. 143
Paper Package Company 140
Peter Partition Corp. 145
Peters Machinery Co. 122
Pneumatic Scale Corp., Ltd. 47
Potdevin Machine Co. 158
Pyroxylin Products, Inc. 164

Rayon Processing Co. of R. I., Inc. 118
Resina Automatic Machinery Co., Inc. 132
Rexford Paper Company 149
Reynolds Metals Company 12, 13
Riegal Paper Corporation 32
Robertshaw-Fulton Controls Company 176
Ross & Roberts, Inc. 155
Roto Bag Machine Corp. 142
Rowell, E. N., Co., Inc. 167

Sanford, William B., Inc. 154
Scandia Manufacturing Company 16
Schaefer Machine Co. 144
Seal-Spout Corporation 156
Shawray Printing Corp. 160
Sheffield Tube Corporation, The 15
Shellmar Products Corporation Back Cover
Smith, H. P., Paper Co. 21
Southern Gravure Service 158
Standard-Knapp, Division of Emhart Mfg. Co. 26, 27
Standard Printing Company 25
Stein, Hall & Co., Inc. 46
Stevens-Wiley Mfg. Co., Inc. 163
Stokes & Smith Co. 175
Stuyvesant Engineering Company 174
Sullivan Heat Sealing Equipment Co. 146
Sun Chemical Corporation 50
Swift & Company 33
Sylvania Division (American Viscose Corporation) 187

Thilmany Pulp & Paper Company 162
Transparent-Wrap Machine Corp. 153
Traver Corporation 9
Tri-State Plastic Molding Company, Inc. 11
Tupper Corporation 14
Twitchell, E. W., Incorporated 136

Union Paste Company, The 41
United Board & Carton Corporation 49
United Mineral & Chemical Corp. 148
U. S. Automatic Box Machinery Co., Inc. 54
Upressit Products Corporation 169

Vanant Products 6
Venesta Limited 10
Vertrod Corp. 135
Vichek Tool Company, The 159

Weigh Right Automatic Scale Company 155
West Carrollton Parchment Company 56
Wolverine Paper Converting Machine Corporation 166
Wrap-Ade Machine Co., Inc. 150
Wrap-King Corporation 129
Wright Machinery Company 48

Zumbiel, C. W. Company 126

Modern packaging

Published by Modern Packaging Corp.
575 Madison Avenue, New York 22, N.Y.

A BRESKIN Publication

Explore new worlds in packaging with SYLVANIA CELLOPHANE

It's easy to give free rein to creative packaging ideas with economical Sylvania Cellophane to show you the way. This versatile, transparent film just naturally lends itself to sales-making designs. That's because Sylvania offers you not one—but a whole family of cellophanes—each engineered with specific requirements in mind.

It comes with controlled moisture protection—in different gauges. It heat seals strongly and instantaneously either in handwrapping or on high speed automatic equipment. It can be economically printed on fast rotary presses with lustrous color effects.

Your Sylvania representative will help you choose the cellophane that fits your requirements. Talk over your problems with him or write us mentioning the application in which you are interested. Address: Market Development, Dept. MP-8.

SYLVANIA® CELLOPHANE

SYLVANIA DIVISION, AMERICAN VISCOSE CORPORATION
Manufacturers of cellophane and other cellulose products since 1929
General Sales Office: 1617 Pennsylvania Blvd., Philadelphia 3, Pa. *Plant:* Fredericksburg, Va.

"Treasure-chest" package fabricated of transparent Vuepak by Acetate Box Corporation, Brooklyn, N. Y.

Buried treasure? No, not at all.

This manufacturer put his product in full view . . . in a package of Vuepak where *everyone* could find it.

Smart man! For dozens of manufacturers have proved that nothing sells the quality, the desirability of your product faster than the product itself—in a clear, show-all package of Vuepak, Monsanto's rigid cellulose acetate packaging material.

Best of all, popular items are as profitable in Vuepak as more luxurious items. For Vuepak actually costs *less* than you might think. And—as your sales increase, packaging costs per unit are cut materially.

Good reason to investigate Vuepak for your product TODAY. See your box supplier; or write to Monsanto for full information. The coupon is for your convenience. Vuepak: Reg. U. S. Pat. Off.

Vuepak tells it, sells it fast... at a price you can afford for packaging

MONSANTO
CHEMICALS—PLASTICS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

MONSANTO CHEMICAL COMPANY, Plastics Division,
Room 7, Springfield 2, Mass.

Please send me more information on Monsanto Plastics for packaging.

Name & Title _____

Company _____

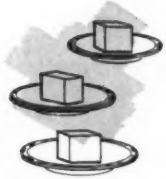
Address _____

City, Zone, State _____

MARATHON'S
"individual"
LINERLESS
ICE CREAM CARTON

A "fountain" selection of flavors

(...in an ice cube tray!)



Easy to Please!

Everyone's happy when you sell your ice cream in "Individual" *serving-size* cartons. They make it so easy to keep everyone's favorite flavor of ice cream on hand! Without wasting ice cream, or refrigerator or freezer space, "Individuals" make it possible for *all* of a dealer's customers to buy, store and serve ice cream often. An assortment of a family's favorite flavors fits in an ice cube tray ... letting the family enjoy ice cream as an everyday food!

Easy to Serve!

No more spooning or slicing! Just a quick pull on the flap opens the "Individual" carton for serving directly onto plate. Homemakers will like buying your ice cream in this convenient new package . . . even children can serve themselves from this carton! Package part of *your* ice cream output in promotable "Individuals", and sell to the *new* group of customers created by this easy-to-store, easy-to-serve linerless carton!

✻ **Offers accurate cost control, quick service, and uniform servings to commercial establishments and institutions. It's the *newest, most promotable, most profitable* idea in ice cream packaging!**

Protective Packaging
FOR AMERICA'S FINEST FOODS **MARATHON**

✻ **Available in 3.2, 3.5, 4, 5 and 6 oz. sizes. For further information, see your Marathon representative or write Marathon Corporation, Menasha, Wisconsin.**

Shining Example

of product protection

Oleomargarine, wrapped in Shellmar laminated foil-parchment is rapidly becoming the top favorite of the refrigerated cases. Good reason, too . . . its delicate, fresh-made taste is sealed-in. And shoppers are attracted by the smart appearance of this Successful Package Creation.

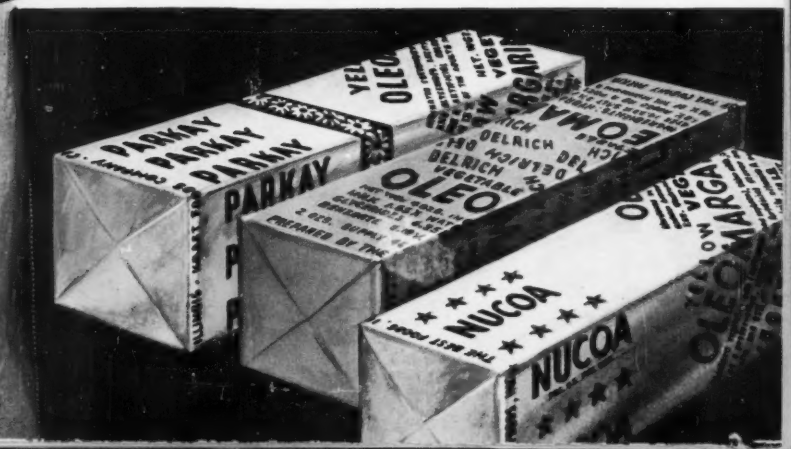
No wonder most of the largest oleomargarine producers have turned to this Shellmar material for the solution to their packaging problems.

Perhaps your product, too, can benefit from the creative skill and knowledge of your Shellmar Packaging Counselor. He can help you to use available materials to best advantage, or to get more packages from your present material allocations. Talk it over with him today.

MILITARY PACKAGING—*Shellmar facilities are again available to suppliers of the armed services. A wide range of approved materials is allocated to priority orders.*

Shellmar Products Corporation • Mt. Vernon, Ohio

Plants: Mt. Vernon and Zanesville, Ohio • South Gate, Calif.
Mexico City • Medellin, Colombia • Sao Paulo, Brazil

Shellmar
"Successful Package Creations"

The Hallmark of
Successful Package Creations